

*SUPERINTENDENT'S
ANNUAL NARRATIVE
FY2010*



YELLOWSTONE NATIONAL PARK



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Superintendent's Office

The Superintendent's Office consisted of Superintendent Suzanne Lewis, SES, Colin Campbell, Deputy Superintendent, GS14, and Chris Lehnertz, Deputy Superintendent, GS14. (Chris Lehnertz left Yellowstone in Mid-August-to take the job of the Pacific West Regional Director. She will be in charge of 3,000 employees and 58 national parks), Executive Assistant, Janice Laye, GS09, and Secretary and FOIA Officer, Kerrie Evans, GS08. Seasonal retiree Jean Sigafos worked as the Office Secretary for Kerrie Evans from April to September while Kerrie was on maternity leave.

Hot Topics include:

Record setting visitation: Over 3,640,000 visitors!

Grand Opening of Old Faithful Visitor Education Center, August 25

America the Beautiful Coin Event for the public, at the Old Faithful Lodge Rec Hall in June.

Winter Use

Bison Management

Wolves

Special Visitors-Vice President Joe Biden and NPS Director Jon Jarvis visited in July to highlight stimulus programs in the park.

NASA Astronauts Robert "Bob" Behnken and his wife K. Megan McArthur, who recently flew on NASA Space Shuttle missions, visited the park and returned the Yellowstone banner that flew on Behnken's latest space shuttle mission. The banner has been placed in Yellowstone's archives.

YPF: Superintendent's trips with the Yellowstone Park Foundation include Los Angeles and San Francisco California, Atlanta, Georgia, and New York City. The Superintendent attended the Canon World Expo and gave a presentation about Yellowstone to Canon's employees and guests in September.

Special Award- Superintendent Lewis was awarded the Rachel Carson Award for Natural Resources in May by Audubon Magazine.

The Yellowstone FOIA Officer completed 28 FOIAs including requests from PEER, BFC, and several law firms.

19- Congressionals

34 - Chapel Reservations

65 - VIP Reservations at park hotels

Public Relations

In January of 2010, the Public Affairs Office was reorganized, and the film permit operations, along with seasonal employee Karen McEneaney, were transferred to the Visitor Services Office. Stacy Vallie transferred to a new position in the Contracting Office. For the remainder of FY10 and continuing into FY11, Al Nash, Chief of Public Affairs, and Linda Miller, Assistant, carried

the responsibilities of the Public Affairs Office alone. Fire Information Officers were assigned to various summer fires to help cover that additional workload.

Press releases for FY10 totaled 167, including multiple fire updates. Top stories included: record visitation; opening of the new Old Faithful Visitor Education Center; release of a Yellowstone quarter in the America the Beautiful series by the US Mint; adoption of an interim winter use plan; continuing work on an EIS and development of a new winter use plan; fee free days; wild fires and various wildlife related issues, including a bison goring which was caught on video by one of the victims. Some of the other more newsworthy items included: US Marshalls search for felon prison escapees in and around the park; a brief July visit by Vice President Biden and NPS Director Jarvis to highlight Recovery Act funding; nine people injured by lightning at Old Faithful; two missing person searches – one of which remained unsolved; and several fatalities including two from motorcycle accidents, two in an accident involving illegal ice climbing, an angler who was washed downriver but died of unknown causes, a visitor who drowned at the Firehole swimming area, and a suicide.

The two most contentious park issues continue to be winter use and the management of bison. These topics consistently draw local, regional, national and even international attention. Bear-inflicted injuries and deaths on USFS lands near the park boundaries during the summer also brought attention to our bear populations and management policies. These issues are very complex, controversial, and perpetual, requiring an extensive commitment of Public Affairs staff time to address the hundreds of congressional, media and public information requests related to them. With the legal complexities of these issues, comes the need for proactive planning, rollout strategies, media plans, community and interagency interaction and communication, and developing employee talking points and question and answer sheets.

PAO staff coordinated or prepared itineraries and interviews with various Yellowstone managers for numerous local, national, and international representatives of the media, academia, and government groups. The top item of interest overall, continues to be wolves, with numerous requests for interviews with Wolf Project Supervisor, Doug Smith, and Rick McIntyre.

Five international groups visited the park with assistance through the Public Affairs Office in FY2010. Several others were in contact, but for various reasons were redirected to other NPS areas, often with the help of the Office of International Affairs in Washington, DC.

Management Assistant

In 2010, the Management Assistant's Office, within the Office of the Superintendent, continued to focus primarily on the winter use issue. John Sacklin was the Management Assistant, and Kevin Franken served as Planning Assistant until March, when he took a position with the Yellowstone Center for Resources. Alana Darr filled in the gap as Planning Assistant in the summer for two months, and Vicki Regula joined the staff as Planning Assistant at the end of the year. Joe David completed his detail to the park from the BLM (helping with the temporary plan) from August to November, 2009.

2008 Interim Winter Use Plan and 2009 Rule:

As 2009 opened, the park was completing an interim winter use plan and rule to guide use for two winters. As background, on November 7, 2008, the U.S. District Court for the District of Wyoming ordered that the NPS reinstate the 2004 temporary rule until such time as it could promulgate an acceptable rule to take its place. In response, the NPS complied with the court

order and reinstated the 2004 rule (without the sunset provisions) through publication in the December 9, 2008 *Federal Register*. The 2004 plan allowed for up to 720 commercially guided, best available technology snowmobiles and 78 commercially guided snowcoaches per day. The court ruling also provided time for the NPS to determine appropriate short- and long-term winter planning processes. The NPS reopened comment on the interim or “318” rule in the July 24, 2009 *Federal Register* for an additional 45-day period. Taking into account the body of comment from both the EA and rule public review periods, the NPS signed a Finding of No Significant Impact on October 15, 2009 and published a final rule in the November 20, 2009 *Federal Register*. For Yellowstone, the interim rule was to be in effect for two winters (2009-2010 and 2010-2011) while a long-term winter plan would be prepared. For Grand Teton National Park and the John D. Rockefeller, Jr. Memorial Parkway, the 2008 plan/2009 rule is a permanent, long-term decision.

The November 7, 2008, Wyoming court ruling was appealed by National Parks Conservation Association (Intervenor-Appellant) to the 10th Circuit Court of Appeals, which ruled on November 24, 2009. The Circuit Court dismissed NPCA’s appeal as moot (because the NPS had published the “318” rule on November 20, 2009). As an aside, the 10th Circuit Court ruling is one of the more readable summaries of the legal situation for winter use planning.

The State of Wyoming and Park County, Wyoming challenged the interim rule in Wyoming federal court (Judge Alan Johnson). National Parks Conservation Association intervened on behalf of NPS, and International Snowmobile Manufacturers Association intervened on behalf of the state and county. At the conclusion of oral arguments on July 9, 2010, Judge Johnson indicated he would rule in favor of NPS, and he did so in his written ruling of September 17, 2010.

On September 28, 2010, Judge Emmet Sullivan denied without prejudice a motion by the Greater Yellowstone Coalition and National Parks Conservation Association for the U.S. District Court for the District of Columbia to assert continuing jurisdiction over agency actions on remand. Judge Sullivan offered plaintiffs the opportunity to refile their motion by October 25, 2010. The plaintiffs did not file a response.

The legal issues on the interim plan have not been settled, however. In late-January 2011, the State of Wyoming and Park County, Wyoming appealed Judge Johnson’s decision to the 10th Circuit Court of Appeals.

New Long-Term Plan

Public scoping for a new long-term plan occurred from late January through late-March 2010 and included six scoping meetings and a meeting with cooperating agencies. The states of Wyoming, Idaho, and Montana, and five counties and the EPA, are (or have indicated an interest in being) cooperating agencies. Over 9,000 scoping comments were received.

A draft range of alternatives to be analyzed in the forthcoming Draft EIS was released to the public in late July 2010, and the park held two public webinars, a public conference call, and a call with cooperating agencies, all in August, to answer questions and explain the alternatives. The new EIS process includes a Project Team, composed of Natural Resource Program Center, region, and park staff to help guide the process. Also, Public Engagement and Science Working groups are assisting with those aspects of the new planning process.

Managed Winter Use

The winter of 2009-2010 represented the sixth winter under a managed winter use regime. All snowmobiles had to be commercially guided. Daily limits were in place for snowmobiles and snowcoaches. All recreational snowmobiles had to meet NPS best available technology requirements. The parks were closed from 9 in the evening until 7 in the morning, and other restrictions have also been in place. Actual use was well below limits, with snowmobile use averaging 205 per day (peak day of 426) and snowcoaches averaged 29, with a peak day of 54, during the winter of 2008-2009.

The winter monitoring results over the past five winters indicated generally very good results. Historic, unacceptable conditions no longer exist. Monitoring shows very good to excellent air quality significantly reduced sound levels, few wildlife impacts, and an excellent experience for visitors to Yellowstone. A 2007-2008 winter visitor survey by the University of Montana indicated near 100% satisfaction.

However, the NPS recognizes there is a strong public perception that unacceptable conditions still exist in the parks. Aside from navigating the legal waters, a continuing challenge facing the NPS is to better communicate that the managed snowmobile and snowcoach access program has worked.

Other Accomplishments

John co-authored a paper for a 2011 edition of *Yellowstone Science* with Wayne Freimund, Mike Patterson, and Keith Bosak of the University of Montana. Entitled “Soundscapes and the Yellowstone Winter Experience,” the paper is based on the 2007-2008 winter survey (noted above) that was intended to help inform park managers about the importance of natural soundscapes to visitors, visitors’ perception of sound from oversnow vehicles, and visitors’ acceptance of visitor management actions taken to protect natural soundscapes.

Comprehensive Planning and Design

Developing the Comprehensive Planning Team:

Management identified the need to address the development and redevelopment of areas as park facilities age and visitation patterns change. They desired a comprehensive vision to protect resources and enhance visitor experience. The Comprehensive Planning and Design team was created to address this need. This year, the team was expanded by adding a writer/editor to aid with comprehensive planning documents. The writer/editor position was filled by Alicia Murphy. The Planning lead for the Lake Area Comprehensive Plan is being recruited at this time and a new position, an Environmental Protection Specialist, will be recruited this fall. Several interns have assisted the Comprehensive Planning and Design staff throughout the year.

Tower-Roosevelt Comprehensive Plan:

The team completed the Tower-Roosevelt Comprehensive Plan; the FONSI was signed in September 2009. Planning components provide limits of acceptable change and include planning zones, planning prescriptions, and design standards. Several projects are currently being evaluated using the Tower Roosevelt Comprehensive Plan, including replacement of the Saddling and Tack Barns, a Shade Shelter, utility projects, and a corral fence. The plan will also serve as a template for future comprehensive planning in the park.

Old Faithful Area Comprehensive Plan/EA:

Public and internal scoping occurred for the Old Faithful Comprehensive Plan in May. This plan includes the Old Faithful developed area and portions of the Upper Geyser Basin. Public meetings took place at Old Faithful, West Yellowstone, and Gardiner, Montana. Comprehensive planning staff also met with concessioners and tribal stakeholders. Approximately 249 substantive comments were received and analyzed. Vehicular and pedestrian circulation, wayfinding, and resource protection surfaced as issues of concern.

Resource surveys for the Old Faithful planning boundary were completed for natural, cultural, scenic resources and visitor experiences. Last year's planning and design charrette, featuring academic, private sector, and public sector participants, developed conceptual approaches to issues in the Old Faithful Area. Five planning and architectural firms participated as did faculty and students from Montana State University's School of Architecture. A printed document highlights the resulting efforts. The concepts from the charrette will be used during the comprehensive planning for the Old Faithful area. A Yellowstone Park Foundation grant provided funding for this effort.

Lake Area Comprehensive Plan/EA:

Public and internal scoping occurred for the Lake Area Comprehensive Plan in July. This plan includes the Lake, Fishing Bridge, and Bridge Bay developed areas and portions of the Yellowstone Lake shoreline. Public meetings were held at Lake and Cody, Wyoming and Bozeman, Montana. Meetings were also held with concessioner stakeholders. Approximately 107 substantive comments were received and analyzed. Access to the Lake, keeping the area unchanged, vehicular and pedestrian circulation and resource protection surfaced as issues of concern.

Resource surveys for the Lake Area planning boundary are being completed for natural, cultural, scenic resources and visitor experiences.

The 2007 planning and design charrette, with academic, private sector and public sector participants, developed conceptual approaches to issues in the Lake Area. The concepts from the charrette will be used during the comprehensive planning for the Lake area.

Mammoth to the North Entrance Charrette:

A planning and design charrette for the Mammoth developed area and the historic North Entrance was completed in September by the Comprehensive Planning and Design team. In preparation for this design workshop, graduate students in the School of Architecture at Montana State University developed a briefing document to collect the maps and resource information needed by the participants during the Charrette. The actual Charrette invited over 65 participants; academic, private sector, and public sector participants to assist in providing conceptual approaches to issues in the Mammoth and North Entrance areas. Fort Yellowstone, in the heart of Mammoth, is the administrative site for the first headquarters of the National Park idea. It may represent one of the most important landscapes in the National Park Service. As visitation increases and resources change, the park seeks ways to facilitate an enhanced visitor experience in this area while further protecting resources. The concepts from the charrette will be used during the comprehensive planning for the Mammoth to the North Entrance area. A final

booklet documenting the work will be prepared by the students and printed. A Yellowstone Park Foundation grant provided funding for the Charrette efforts.

Cultural Landscapes Program:

As a resource for comprehensive planning, cultural landscape inventories were completed for several areas in the park. These contracted documents met the GPRA goals for cultural landscape resources in the park; 10 of 41 cultural landscape were inventoried and in good condition. Comprehensive Planning and Design staff served as contracting officer's representatives for all the contracted work. Cultural landscape inventories were provided for Tower Ranger Station and Roosevelt Lodge Historic Districts. Old Faithful, Lake Hotel, Lake Hatchery, Fishing Bridge, and North Entrance cultural landscape inventories are underway. The Mammoth Cultural Landscape Report is also underway with the Olmsted Center for Preservation as the provider for this important work.

Administration

In FY10 the Administration Division operated on a base budget of \$2.68 million (excluding Human Resource and contracting budgets), with 45.5 FTE in six branches: Technology Services, Property and Supply, Contracting, Budget and Finance, Office Services, and Human Resources. The division contributed an additional \$556,000 to the combined HR budget (including funds from Glacier and Grand Teton National Parks bringing the total to \$1.23 million for HR – see below).

FY10 was a year of significant change for Yellowstone's Administration Division, including the launch of the Northern Rockies Servicing Human Resource Office (NR SHRO) and consolidation of funding for the Northern Rockies Major Acquisition Buying Office (NR MABO) under the Intermountain Region (IMR). The SHRO is a virtual consolidation of the HR functions of Yellowstone (YELL), Glacier (GLAC) and Grand Teton (GRTE) National Parks to serve these three parks along with Grant-Kohrs Ranch NHS, Bighorn Canyon NRA, Little Bighorn Battlefield NM, Devils Tower NM, Fossil Butte NM, Golden Spike NHS, and Timpanogas Cave NM. The MABO serves the same parks, and while MABO staff supervision remains at the park, the budget for the MABO was centralized in IMR in FY10.

Formation of the SHRO included adding a GS-12 Human Resource Officer to the YELL staff. Ginger Hamilton was hired for this position in the spring, and then promoted to the GS-13 SHRO Lead position behind Holli Traucht who had left the NPS for the private sector in November. Nathan Anderson was subsequently hired at the end of FY10 as the YELL Human Resource Officer. Other staffing changes in HR included the retirement of Paula Trisdale, Electronics Technician on detail from the Technology Services Branch as HR Assistant. Karin Schwartz joined the SHRO as HR Assistant in the fall.

Other staff changes in FY10 included the retirement of Chief of Administration Joanne Timmins and the retirement of Jeff Sneddon, Lead Contracting Officer for the Northern Rockies Major Acquisition Buying Office (NR MABO). Finance Officer Teresa Fischer transferred to the Fee Program Budget Analyst position, and was replaced by Sue Capasso, who had served a one-month detail earlier in the year as Acting Comptroller. Long-time YELL employee and

Financial Support Technician Betsy Mitchell left Yellowstone for Acadia National Park along with her husband Andy who was selected for the Fire Management Officer position at ACAD. Comptroller Lindsay Robb served as Acting Chief of Administration under a temporary promotion not-to-exceed one year. From March to May budget analysts from Shenandoah, Marsh-Billings-Rockefeller, and Mount Rainier served as Acting Comptroller. And Jean Sigafos joined the Finance staff as a reemployed annuitant to assist through year-end closing and the many staff transitions.

During FY10 the Acting Chief and Branch Chiefs for the division developed a Division Safety plan for all Administration Division employees. The division plan echoed the Parkwide goal to engage all employees in actively engaging in and improving our safety culture. The Administration Division plan identified the following objectives, core values, and annual goals:

Goals and Objectives

1. Every employee goes home safe and sound every day.
2. Every employee participates in the park safety program, including but not limited to:
 - Developing an individual safety training plan with his or her supervisor,
 - Attending safety training,
 - Knowing the park safety policy, goals, and objectives,
 - Applying safe work practices,
 - Knowing her or his responsibilities to work in a safe and healthful environment,
 - Speaking up to keep himself or herself and co-workers safe.
3. Supervisors and Managers attend safety and health management training.

Core Values

1. Prevention is the only way to ensure employee health and safety.
2. Working safely is an expectation and responsibility of each employee, supervisor, and contractor.
3. All employees and supervisors will work to eliminate or control hazards.
4. All employees and supervisors will watch out for one another, ensuring no one is placing themselves in harm's way.
5. Any park employee has the right to stop work if he or she feels that anyone is in imminent danger.
6. Safety training and equipment will always be provided.

Goals for 2010

- All 1st Line Supervisors will receive training to improve proficiency in
 - Safety Management Information System (SMIS)
 - Appropriate conversation content and technique with employees upon notification of an accident, injury, near miss, or incident
 - Performance Management related to Safe behavior and creating a nurturing and caring workplace.
- All employees will have individual safety training plans attached to their Employee Performance Appraisal Plans (EPAPs).
- Involve more employees in conducting weekly safety meetings through 1) volunteering, or 2) assigning. Branch Chiefs and supervisors are responsible for reviewing and approving topics and coaching presenters.
- Every employee will have participated in a workplace hazard-identification inspection (walk-around) and participated in the correction of any hazards found.

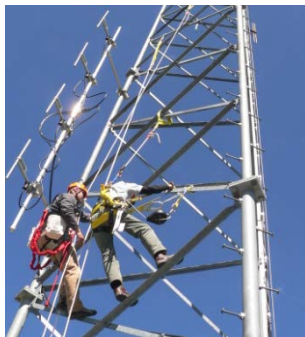
- Rewards and incentives will be developed, communicated, and implemented.
- Improved understanding across the division of “People-based” and “Behavior-based” concepts, principles, and practices.
- Implement Operational Leadership as identified in the Park’s Business Strategy
- Encourage participation in quarterly safety surveys

The six branches of the Administration Division continued tracking many performance metrics in FY10 and provide the following stats for comparison with prior years:

Technology Services

In FY2010 the Technology Services Branch of Administration consisted of eight permanent, six term, two seasonal, and two STEP employees. Within the Branch, there are four shops.

- 1.Alarms/Access Control/Video Security/Utility Monitoring
- 2.Information Technology/Computer Support Services
- 3.Land Mobile Radios
- 4.Telecommunications



Safety

Technology Services had one reported injury this year. There are significant hazards inherent in this field of work and we congratulate the whole crew for their impressive record of safety. Some achievements in the realm of safety:

- Along with input from all the divisions, we prepared and finalized an Underground Utility Locate YOP. This YOP was signed into action by the Superintendent June 2, 2010, and it includes methods to notify all “other utilities” the loop and inform on-site contacts when

and to close

locates are complete. The “One Call” service notifies commercial utilities, and we notify “other utilities” including NPS district maintenance, Craft Shops, Xanterra, Delaware North, YPSS and others. Ninety-three tickets were processed in 2009. In 2010 over two-hundred seventy locate tickets were processed. Snow staking locates for all park roads proved to be challenging but successful.

- We developed a Safety Training Checklist for the specific groups in the Technology Services branch. After identifying critical training issues on the checklist, we conducted 16 biweekly safety trainings to address items on the safety training checklist. We provided training to the Technology Services safety trainer and in most cases, developed and presented our own instructional materials to present to our branch and to the Administration Division. In a few cases we solicited safety trainers from other divisions (i.e. Animal Jam training). Twenty-one safety meetings were held during regular Wednesday morning meetings.
- We certified a Radio Shop trainer in Tower Climbing Rescue and Safety Training and provided training to all Radio Shop staff. The IMR Radio Coordinator provided us with funding to travel to Moab to train GLAC, ROMO, AMIS, CANY, and WACC on Tower Safety and Rescue as well. The Radio Shop also completed Radio Frequency Safety Training to protect ourselves and others from hazardous radioactive energy.

Tower Climbing Safety & Rescue Training - Elk Plaza

- Avalanche awareness and winter safety classes were conducted on-site at Henderson Mountain and Mount Washburn to address the hazards of winter work at these repeater and communication sites.
- Tech Services contributed to both the Employee Safety Committee Re-Engineering Team and to the re-establishment of regular Employee Safety Committee Meetings.

Asset Management

Due to increasing service wide utilization of FMSS and the Project Scoping Tool in PMIS, Technology Services began participating in the Asset management program. Being the largest and most diverse technology group in the Service, new locations and assets had to be proposed to the help desk so that meaningful data could be captured.



Hierarchy of FMSS Assets - Radios

Fire/ Security Alarms, Access Control, Video Security, and Utility Monitoring

New installations and cyclic replacements of fire and security alarms, and utility monitoring systems continued to be scheduled in large numbers in 2010. An eleven building project was completed with contracted electrical labor, and a four building project was awarded to another electrical contractor in September. Several in-house projects were completed by TS staff. The alarm group created all project design documents including CAD drawings, electrical calculations, and statements of work with certified designers. The group programs and coordinates checkout with the Structural Fire Chief (Authority Having Jurisdiction) and certified technicians. At the end of each project, preventive maintenance is scheduled, and O&Ms and record drawings are completed.

The alarm group assisted five other Intermountain Region parks and monuments with design, repair, programming and installations. Those were Little Bighorn Battlefield National Monument, Fort Laramie National Historic Site, Bighorn Canyon National Recreation Area, Capulin Volcano National Monument, and Glacier Bay National Park and Preserve. The parks often paid for travel, material, and salaries.

Four fire alarm systems were replaced after being damaged by lightning; one Canyon dormitory fire alarm system was designed and installed from the ground up. One technician achieved NICET II Fire Alarm and NICET I Special Hazards certification.

Annual tests are required by NFPA's Fire Alarm Code and Guide for Premise Security. We continued annual tests of one-hundred seventy-two NPS alarm Systems and revised the fire alarm testing database (FAIT) to capture data, schedule, and create work orders for security and utility monitoring systems (YASIT).

A clean agent suppression system was installed in the Administration Building PBX Room. NOVEC 1230 was the suppression agent specified for this installation. It has the best environmental profile in the industry, with 0 factor global warming potential and 0 factor ozone depletion. It is effective in



extinguishing fires in equipment rooms that contain sensitive electronic equipment resulting in little or no damage, unlike water based systems. We hope to contract the same system in the Communication Center in FY11.

NOVEC 1230 Clean (and
Green) Agent Suppression
Systems

After a year of planning and discussion, we began the deployment of Automated License Plate Recognition (ALPR) character recognition cameras at the three entrance stations in September. ALPR involves the use of specialized cameras and software that recognize a license plate, captures an image of the license plate, and interpret the characters of the license plate into data that may then be used for multiple purposes.

Radios



Three Rivers Patrol Cabin Radio Antenna and Solar
Charging System

The radio shop continues to be busy with backcountry cabin projects. Seven cabins either had new radio battery charging stations and antennas installed, or had repairs made. Foot and horse travel was used when possible and safe for the crew.

Antennas were replaced at mountain top repeater sites on Mount Sheridan, and Survey Peak. Several trips were made to repeater sites for preventive maintenance, and testing at Mount Holmes, Purple Mountain, Survey Peak, Mount Sheridan, Top Notch, and Mount Henderson. Antennas and poles were replaced at the South Entrance and Bridge Bay Marina. Ten VOIP radio link boxes

were upgraded. Remote controllers were installed at Mammoth (5) Lake, West, Tower, and Old Faithful.

A temporary test repeater was deployed on Druid Peak and the Buffalo Ranch Corrals to test for improved coverage in the Lamar Valley. Two Scene of Action (SOA) Repeaters were mobilized and demobilized for the Arthur and Beach Fires. We installed four radio consoles at the new Wildland Fire Dispatch office.

We trained 780 end users on portable and mobile radio use. A specific LE radio training class was developed and implemented. We observed better radio communications, we believe, as a result of two consistent years of training.

On-site district preventive maintenance checks on mobile LE radios and base stations occurred in the spring. Mobile radios were checked for programming and hardware issues. Where repairs were necessary, they were often completed on-site. Back in Mammoth, 231 portable and mobile radio repairs were made, 80 vehicle radios were installed, and 290 portable and mobile radios were reprogrammed.

Yellowstone Radio Technicians supported Devil's Tower National Monument, Bighorn Canyon NRA, Little Bighorn Battlefield National Monument, and Wyoming's Medicine Wheel Historic

Site with programming, repair, and consultation. The IMR Radio Coordinator provided a regional account with \$27,000 to offset salary, travel and material costs.

Wireless Cellular Communications

Yellowstone developed ten-year rights of way for the existing wireless telecommunication providers' facilities and cellular towers. Existing service providers can continue to provide services in the Grant, Canyon, Mammoth, and Old Faithful developed areas. An SF299 request for right of way and engineering proposal was received for the Lake site at the fresh water tank. Proposals for the Lake cellular site continue to be considered and specifications negotiated to meet the requirements of Alternative C of the Wireless Plan EA. A Federal Register notice will go out over the winter and construction could begin in the spring of 2011. Currently, limited availability of leased Qwest T-1 circuits in the interior of the park is the limiting factor from any vendor being able to provide service from a cell tower in the Lake area.

We developed the right of way and worked with Park Resource Managers on the development of a Categorical Exclusion to allow Qwest to follow through with an optic fiber burial project that will, in part, follow the old railroad bed from the boundary at Reese Creek to the boundary at the Gardiner High School. Qwest needs to complete this project to meet the requirements of a Montana Public Service Commission ruling that requires them to make DSL available to 27 underserved wire centers. The existing microwave link from Livingston to the Gardiner Central office is at capacity. Once this link from Livingston to Gardiner is complete, Qwest will be able to provide additional T-1 circuits to the park – something eagerly anticipated by both the NPS and park Concessioners.

The Wireless Telecommunications Committee developed a Wireless Telecommunications proposal form and procedure to review the details of new wireless services against the Wireless Telecommunications FONSI signed by the Superintendent in April 2009. The Committee meets monthly to review proposals, provide informational updates on developing and approved projects, and make recommendations to the Superintendent on approval or denial of new wireless projects.

Telecommunications

The procurement for the 750 dial tone PBX switch upgrade was awarded in September 2010 to AdvanTel. AdvanTel is a Platinum Provider for Avaya Government Solutions and will be supplying materials, programming, and installation. We replaced the PBX room UPS (uninterruptible power supply) in July when the existing fifteen year-old unit began failing to energize the PBX and network switches during power outages. We got our money's worth out of the service contract with Avaya in 2010 with several service calls for boards, chassis, and line cards. Yellowstone and Avaya will be happy to see the upgrade completed in October/November 2010. The upgrade will also include a new Voice Mail System with approximately 800 voice mail boxes.

Besides regular programming, and trouble tickets, other work in Telecomm included rewiring three facilities, including the Fire Cache, and phone and network mobilization, demobilization and support for the Beach and Arthur Fires including installations at the Boy Scout Camp in the Shoshone National Forest.

We processed 292 monthly telephone bills under one park-wide account.

Information Technology / Computer Support Services

IT implemented Virtualized Server technology, which was an innovative way to reduce six servers from the CSS server rack. This reduces energy usage and heat generated in the server room, so less cooling is required. CSS continued the Printer / Toner recycling program, saving the park money on printing and redirecting waste from landfills.

New computers were a big thing in 2010. CSS set up 70 new computers, while on the other hand 443 IT property items were surveyed.

A new challenge confronted us this year with the Data at Rest (DAR) encryption requirement for laptop computers. IT/CSS was very careful to ghost every customer's computer before loading the software, which was time consuming but resulted in no one losing data during the conversion. One-hundred fifty-five customers had their laptop computers encrypted. A small group of computers proved to be too stubborn to accept encryption and will be phased out in the future in favor of models that will meet the new standard for data protection.

We kept busy building and maintaining various and varied databases for rangers, human resources, technology services, backcountry offices, maintenance (utilities) and asset management.

Both Technology Services and CSS checked employees in and out of the park with a total of 2,078 transactions processed and we once again, tracked FISSA training for approximately 900 computer users.

Two new VBNS network connections were ordered by WASO and installed with full QOS (Quality of Service) in order to test the performance of our existing Voice Over IP (VOIP) and Radio Over IP (ROIP). Network T-1 connectivity was installed on Mt Washburn for ROIP and Webcam use.

General

We kept busy supporting Fuel Master with one-hundred and eight preventive and reactive service calls as well as equipment upgrades, and procured a custom, secure, access controlled door that was built into the glass wall in the Finance cash room.

The new OFVEC has lots of special electronic systems, telephones, and network connections that required substantial input from the Technology Services staff. We worked closely with NPS Maintenance, Structural Fire, CTA Architects and Swank Construction on the planning and commissioning of the access control, intrusion, fire systems, video security, telephones and data. We trained end users on the use of the security and access control system. We feel from our perspective that this was one of the smoothest openings in recent history.

Human Resources

The Yellowstone National Park Human Resources Office is continuing its transformation as part of the Northern Rockies Servicing Human Resources Office (NR SHRO). The NR SHRO met with the Administrative Officers from Yellowstone NP, Grand Teton National Park, and Glacier National Park in the spring at GRTE to inform, discuss, and update SHRO structure and communication strategies. The NR SHRO organized and attended two additional meetings which were held at Glacier NP and Yellowstone NP. The purpose of these meetings was to bring the SHRO employees together from all three parks for communication strategies and planning. Accomplishments from the meetings assisted in developing standard operating procedures, standardized tracking forms, and communication within our SHRO organization. These meetings and our bi-monthly conference calls are assisting in developing team collaboration for the NR SHRO.

Yellowstone Human Resources had a busy year in FY 2010. With efforts in centralization our office met requirements to correct and change all position description numbers for the purposes of coding into databases. All employee official personnel folders (eOPF) were reviewed for complying with records management regulations. Unnecessary records were purged, new personnel actions and records were scanned, and information was uploaded into the electronic database eOPF system.

The Human Resources Operations Center (HROC) Phase I began servicing the parks on July 1, 2010. Phase I included position classification, managing length of service awards, and employee notice services. HROC is successful in these new operations with timely results. The average time it takes to classify a position description is approximately nine days. Preparations for HROC Phase II are under way for FY11 when the NR SHRO will implement changes in FPPS routing, which feeds personnel actions into our automated pay and benefits system.

The Seasonal Recruitment Operations Center (SROC) began operations in FY10 and advertised vacancy announcements for Visitor Use Assistants and all Ranger positions including seasonal law enforcement and interpretative rangers this fiscal year. There were some bumps in the road and lessons learned, but the park opened with fully staffed positions. Lessons learned will be utilized for the coming fiscal year including early submission of requests to recruit. This will assist in communication strategies, developing policy with SROC, and mitigating delays in seasonal recruitments.

Yellowstone National Park, Grand Teton National Park and Glacier National Park developed a NR SHRO strategy to jointly advertise many of the seasonal and permanent vacancy announcements. While these recruitments resulted in a very large number of applications, they also insured consistency in the qualifications review of applications and saved the prospective employees from submitting multiple applications. This organization assisted our staff in meeting the Executive Order for Hiring Reform mandating category rating for all delegated examining recruitments.

A total of 56 vacancy announcements were issued from Yellowstone's HR Office during FY2010. Announcements were issued under both Merit Promotion and Delegated Examining

Unit authority in order to attract a large applicant pool. Twenty-two vacancy announcements were contracted to the HROC Franchise and Office of Personnel Management (OPM). All vacancy announcements were prepared and announced in the USAStaffing database, OPM's automated staffing program. The above efforts resulted in filling 92 permanent and 26 Term positions.

Full-day employee orientation sessions for all new temporary and permanent employees were held in all YELL Districts with multiple sessions. Additionally, Yellowstone continues to use the TELNPS station to provide local, free training to the park. Park employees logged over 22,000 official training hours in FY10.

Ginger Hamilton, SHRO Lead attended a job fair in West Yellowstone, MT sponsored by the West District staff in fall 2010 to meet with local residents. Prospective applicants received training in "How to Apply for Federal Jobs" and introduced them to the automated hiring system. Karin Schwartz, HR Assistant represented NPS at a career fair held at Montana State University in Bozeman, MT. Karin informed students on types of position in the park service, job skills required for positions, and how to apply for vacancies.

Yellowstone National Park issued two written reprimands, one written warning, facilitated two counseling sessions on performance, and processed one removal of a permanent employee. The park terminated a term employee during their probationary period. The park received one formal grievance. The formal complaint resulted in finding in favor of the agency.

HR Stats for FY0

Leave Share Recipients	4
Background Investigations completed	527
Drug Tests completed	211
Orientations (park wide)	21 PFT
79 Temporary	
Retirements	12
Death	1
OWCP cases	77
Tel Trainings	21
Training Hours	22,813
OPM/Franchise Announcements	22
Announcements	56
Applications Rec'd	3,264
Positions Filled – perm/term	92 permanent
	26 term
FPPS actions	3,234
EO Complaints	0
Grievances	1
Mediations and counseling sessions	2

Contracting

The Yellowstone Contracting and Procurement office had its first full year of operation in FY10 under a reorganization into the Northern Rockies Major Acquisition Buying Office (NR MABO). This effort (begun in FY09) involved a consolidation of park base budget for acquisition personnel under the Intermountain Regional Office and a base funding increase to cover all support costs. In addition, the budget reorganization provided base funding for two new positions that were previously funded through regional project assessments. In addition to supervising our staff, Yellowstone's Supervisory Contracting Officer took on the role of NR MABO Lead, providing technical supervision to contracting staff at Glacier and Grand Teton National Parks. In FY10 the Contract Specialist position at Bighorn Canyon NRA came under the direct supervision of the NR MABO Lead.

The six contracting staff in Yellowstone solicited, awarded and administered 706 purchase orders and contracts in FY10 obligating \$18.2 million. In addition the staff Financial Assistance Agreements specialist managed 114 grants and agreements at \$7 million. The contracting staff were all warranted, with one Level III, one Level II and three Level I warrants among the staff. The Agreements Specialist received authority for obligations up to \$5M. MABO staff at Glacier, Grand Teton and Bighorn Canyon processed an additional 296 actions in FY10, valued at \$9.5 million.

Property and Supply

In FY10 we acquired over \$25,880 (fair market value) in excess items to include a semi-tractor, pickup truck, and mower attachment. We received all these items at no cost. The Property Office recorded a total of 652 items added and nearly 1,000 items removed, bringing our inventory to a total of 13,598 items with a purchase value of \$49.5 million.

In cooperation with the Ranger Division and Xanterra, we processed 9,281 lost and found items. This process involved donations to Montana Rescue Mission, conversion of items to government property and sale of remaining items on the GSA internet auction website.

In FY 2010, we sold 184 lots, for a total of \$195,688.00. These sales were conducted on the GSA internet auction website.

In its shipping and receiving capacity the Supply Center logged 11,297 packages and 554 pallets of motor freight, in addition to numerous shipments received and processed from local companies such as parts stores, lumber yards, and steel deliveries. The Supply staff logged 104 hours on the forklift and managed a \$250,000 inventory of supply items utilized by staff throughout the park.

Office Services

Office Services continues with a staff of two. During the year we processed 18,515 pieces of outgoing mail through the mail meter machine for Yellowstone National Park, down 253 from the previous year. Four hundred sixty-eight pieces of mail were sent by certified mail and

another 49 were mailed with merchandise return receipt or an electronic confirmation which require extra handling time and adds to the cost.

Required background checks cost an additional \$421.81 for Human Resources letters sent out using certified mail and for the postage paid return envelopes. The number of lost and found packages (found items returned to their owners) increased this year to 152 for a cost of \$407.70. We spent \$293.67 to mail 24 packages of fishing permits to vendors for them to sell.

A total of 2,626 informational packets were mailed by bulk mail amounting to a savings to the government of \$446.42 and a savings of \$1,155.44 to Yellowstone's postage budget that would have been spent if we had sent them regular mail. The number of informational packets sent to visitors planning trips decreased by 68 the previous year. The availability of information on the park's website has made a marked decrease in the number requested from years past.

Another 12,563 pieces of mail were sent out using presorted, automation methods to cut \$15,266.29 from Yellowstone's postage budget. Time spent doing bulk-mailings is money saved from Yellowstone's postage budget and for all taxpayers. The park is very conscientious and continually strives to do business in the most cost-effective manner.

Incoming mail included 48,485 letters, 34,325 flats, and 2,205 parcels for a total of 85,015 pieces of mail that was picked up from the post office, sorted and distributed. While parcels were down by 55, flats and letters increased 1,360. This figure does not include inter-office mail that was sorted and distributed.

A total of 1,371,381 copies were run on the two high-speed copiers in the mailroom and another 85,684 color copies were made. Road closure notices were not printed this year which accounted for the majority of the decrease.

A total of 678 pieces of outgoing correspondence were logged into the database then filed into the central files system for the year 2010. This was up by 92 from the previous year. Totals were not kept of the newspaper clippings, all employee notices, etc. that were also filed.

Budget, Finance, and Central Fee Collections

For FY2010, the park obligated a total of \$69.5M, including \$26.4M in base funds, \$43.1M in other appropriated funds (Line Item Construction, ONPS projects, Repair/Rehab., and Centennial Challenge funds), \$12.2M in visitor, special use, filming, and concessions franchise fees, \$6.8M in concessions utilities and other reimbursable accounts, \$12.1M in donations and grants, \$2.8M in Federal Lands Highway Program support funding, \$1M for wildland fire, and \$3.2M from government furnished quarters and school accounts.

Staff changes in FY10: In addition to the Comptroller and Finance Officer changes mentioned above, Mary Kay Woodin was selected as Financial Support Technician (lead Accounts Payable) in March; coming from the YELL Garage. And Jessica Giamportone was selected as Financial

Support Technician (Accounts Receivable) in August to cross-train with Betsy Mitchell before her move to Acadia.

The hiring of seasonal cash clerks for the Cash & Debt Management Program (Central Fees Office) was a challenge. The returning seasonal is also a school teacher and cannot fulfill a full season, yet the program greatly benefits by hiring her back each year because of her experience. The second seasonal was new to the program and a student hire; ending his season early as well. This left two new seasonal hires near the end of the season (August through mid-October) to train & work up-to-speed while visitation/fee collection was still going strong. Training these new seasonals meant pulling the Lead Financial Technician away since neither had any program experience. We hope to avoid this hiring practice in the future.

In an effort to reduce postage mailing, the Finance team sent electronic copies of vendor payments & GSA work orders. GSA Vehicle mileage for September was estimated early for a more accurate year-end obligation, instead of creating gross mileage estimates. This process proved to be successful and will be the normal practice.

Workload statistics for FY2010 included:

Travel Vouchers	974	
Training Forms	62	
Permanent Change of Station Travel Vouchers	6	
Bills of Collection	621	
Official Receipts	244	
Pre-Authorized Debits	470	(totaling \$5,327,878)
Deposits (both fees and administrative)	117	(totaling \$7.9M)
Income Transfers (credit card income)	24	(totaling \$3,175,376)
Income Transfers (non-credit card income)	22	
Expenditure Transfers (ET)	101	
Third Party Drafts issued	619	(totaling \$218,661)
Utility Payments	872	(totaling \$1,705,529)
Miscellaneous Vendor Payments	342	(totaling \$82,709)
GSA Rental payments	12	(totaling \$246,710)
GSA Fuel reimbursements	12	(totaling \$63,179)
GSA Work order payments	25	(totaling \$71,911)
Tort Claims	2	(totaling \$719)
Quarters to Account ETs	7	
Number of Charge Card Holders	458	(153 required to audit)
Purchase/Travel Charge Card Audits	95	
Travel Only Charge Card Audits	84	
Corporate Charge Card Audits	1	
Number of Accounts Tracked	1,185	
Number of Fund Sources Managed	19	

Concessions Management

Overview

In 2010, the Concessions Management Division managed 64 concession contracts for necessary and appropriate commercial services throughout the park. During the year, the division evaluated services and activities for quality, safety, and adherence to NPS standards. It also reviewed and approved rates based upon approved methods, typically comparability. Two companies held Category I contracts: Xanterra Parks & Resorts (YELL 077) and Delaware North Park Services at Yellowstone (YELL004).

Two companies held Category II contracts: Medcor, Inc. (YELL 002) and Yellowstone Park Service Stations (YELL001).

Forty-six companies held Category III contracts to provide backcountry outfitter and guide stock trips. Eleven companies held fourteen Category III contracts to provide snowcoach and, optionally, summer bus tours.

In addition to concession contracts, the division managed 179 commercial use authorizations for suitable services throughout the park, including 21 for snowmobile tours.

Facility Branch

The Concessions Facility Branch oversaw the concession asset management program for more than 900 government-owned, concessioner-assigned facilities. It developed a system to schedule annual-condition assessments rotating throughout the five developed areas of the park, allocating approximately \$450,000 toward this effort annually. All data was maintained in a concessions database to provide concession contract oversight and maintain the national asset management database (FMSS).

Concessioners submitted annual maintenance plans that identified projects to cure deficiencies and schedule component renewal. Each concessioner also developed a five-year strategy, scheduling Repair and Maintenance Reserve (RMR) projects and identifying repair and maintenance improvement programs. RMR funding and corporate repair and maintenance obligations were instrumental to the preservation of these facilities. All projects were designed and implemented by the concessioners with the review and approval of the NPS.

Operations Branch

The Concessions Operations Branch oversaw commercial visitor services and the administration of concessions contracts and commercial use authorizations. The branch conducted rate studies, evaluated facilities and services for adherence to contractual requirements and NPS standards, and completed annual overall ratings.

In 2010, Xanterra offered facilities and services around the park during the summer and facilities and services at Snow Lodge and Mammoth during the winter. Delaware North operated general stores around the park during the summer and a year-round store at Mammoth. Medcor provided medical services at Old Faithful and Lake in the summer and year-round at Mammoth. Yellowstone Park Service Stations operated staffed service stations around the park during the summer and year-round pay-at-the-pump gas services during the winter. Outfitters and guides operated from July through October. Winter snowcoach operators offered guided tours from December 15 to March 15.

YELL077 – Xanterra Parks and Resorts (XPR)

XPR provided lodging, food and beverage and retail services, transportation, livery and marina services, and other general visitor services. The contract is assigned 831 structures. XPR's gross receipts were more than \$86 million. It paid more than \$2 million in franchise fees. It debited more than \$9 million to a repair and maintenance reserve account.

XPR's contract was to expire on November 30, 2010. By amendment, the contract was extended to November 30, 2013. (In the spring of 2010, WASO awarded to PRIZIM, Inc. a contract to develop the prospectus for the next YELL077 contract.)

Notable XPR projects completed in 2010 included the following: upgrade of electrical services at the Fishing Bridge RV Park, seismic/structural stabilization of the Mammoth Dining Room and Map Room windows, and seismic/structural stabilization of the Old Faithful Laundry Building.

Notable operation events in 2010 included the following: addition of a signature dinner to the Old Faithful Inn menu; an increase of sustainable, local and/or organic food and beverage purchases; and a \$455,000 purchase of new mattresses. Because Fishing Bridge RV Park did not offer electrical hookups due to older infrastructure and insufficient electrical capacity, site rates were reduced from \$35.00 to \$28.00 in 2010.

The park conducted 96 formal evaluations of XPR in 2010 and assigned a "Satisfactory" annual overall rating.

YELL002 - Delaware North Parks Services (DNC)

DNC (dba Yellowstone General Stores) operated twelve general stores throughout the park in 2010. Its contract will expire on December 31, 2018. The contract is assigned 29 structures. DNC's gross receipts were more than \$25 million. It paid more than \$250,000 franchise fees; and debited \$250,000 to a repair and maintenance reserve account.

Beginning in 2009, DNC invested \$150,000 of maintenance capital annually in addition to its corporate repair and maintenance responsibilities. Notable projects completed in 2010 included the Tower Fall Store Renovation and Lake General Store Rehabilitation. These projects partially fulfilled DNC's CFIP obligations. Exterior restoration and preservation was completed on the Old Faithful Lower General Store including the gnarled log work.

Notable operation events in 2010 included the installation of a chilled water filling station at the Tower Store, and an increase of sustainable and local foods sales. Visitor complaints decreased from 2009.

The park conducted 26 formal evaluations of DNC in 2010 and assigned a "Satisfactory" annual overall rating.

YELL001 – Medcor, Inc. (Medcor)

In January 2010, Medcor began operating under a new ten-year contract to provide medical services in the park. The contract is assigned eight structures. Medcor's gross receipts were more than \$2.6 million. It paid \$21,000 in franchise fees. The company has no repair and maintenance reserve obligation.

By operating seasonal clinics at Old Faithful and Lake and a year-round clinic at Mammoth, Medcor offered medical services critical to the park visitors as well as park employees and residents. XPR and

YPSS paid \$600,000 and \$25,000 respectively to Medcor in concessioner support funds. XPR, DNC, YPSS and the National Park Service seasonal employees participated in the Seasonal Employee Health Care Program (SEHCP).

Notable projects included the electrical upgrade of the Mammoth Clinic. Notable operational events included the implementation of digital radiology and comprehensive drug testing.

The Mammoth Clinic served fewer visitors than in 2009 and Lake and Old Faithful served more. There were no visitor complaints in 2010. The park conducted five formal evaluations of Medcor and assigned it a “Satisfactory” annual overall rating.

YELL004 - Yellowstone Park Service Stations (YPSS)

YPSS provided automobile service stations and towing and repair services to park visitors. The contract is assigned 21 structures. YPSS gross receipts were more than \$9 million. The company has no franchise fee obligation. It debited more than \$295,000 to its repair and maintenance reserve account.

Notable projects included the remodel of the Tower Service Station. Pay-at-the-pump service had been installed previously at all park stations making fuel available 24 hours/day, 365 days/year.

Notable operational events included the development and implementation of a towing protocol. The park received some complaints about the costs and service of towing. The park conducted 13 formal evaluations of YPSS in 2010 and assigned it a “Satisfactory” annual overall rating.

Snowcoach Operators and Snowmobile Operators

The 2009 Winter Use Interim Plan/EA, in effect during the winter of 2009/2010, established an allocation of 78 snowcoaches per day and 318 snowmobiles per day until a final plan and EIS are issued. Snowcoach franchise fee and snowmobile commercial use authorization payments combined totaled more than \$200,000.

Eleven companies held 14 snowcoach concession contracts in the park in 2010. All but one operator was assigned a “Satisfactory” annual overall rating; and one contract was terminated. (XPR also offered guided interpretive snowcoach tours under its concession contract.)

Twenty companies held 21 commercial use authorizations to provide guided trips. Snowmobiles were equipped with best available technology (BAT). (XPR and Flagg Ranch also offered guided interpretive snowmobile tours under their concession contracts.)

Backcountry Stock Outfitters

Backcountry guided trips were offered through 46 outfitter contracts in 2010. Stock outfitters provided 508 day trips and 125 overnight trips. The number and duration of trips per contract ranged from zero to 100 day trips and zero to 14 overnight backcountry trips. All 46 stock outfitter operators received a “Satisfactory” annual overall rating. Franchise fee payments received in FY10 totaled more than \$55,000.

Commercial Use Authorizations

One hundred fifty-eight companies operated in the park in 2010 providing visitors with services that included backpacking, day hiking, biking, skiing, fishing, canoeing, kayaking, photography workshops,

road-based tours, and towing. The largest company, Backroads Inc., had more than \$1 million of in-park gross receipts. A number of companies reported \$0. Payments for commercial use authorizations totaled \$30,500.

Staff

Chief, Business Management Division, GS-1101-14 (Jennings) retired in July 2010
Chief, Business Management Division, GS-1101-14 (Helfrich) entered in August 2010
Supv. Concessions Mgt. Specialist, (Branch Chief, Asset Management) GS-1101-13 (Murphy)
Supv. Concessions Mgt. Specialist, (Branch Chief, Operations) GS-1101-12 (Reinhart)
Financial Analyst GS-1101-11 (Gallagher)
Architect GS-801-11 (Dawson)
Concessions Management Specialist, GS-1101-11 (McAdam)
Concessions Management Specialist, (Database Manager.) GS-1101-09 (Smith)
Concessions Management Specialist, GS-1101-09 (Williams)
Administrative Assistant GS-0303-05, Seasonal (Good)
United States Public Health Officer (Larsen)

Budget

- \$ 595,800 in base funds, 74% in personal services cost

Franchise Fee Income

- \$ 1,882,000

Franchise Fee Obligations

- \$787,270 in concessions management program support (personal services in asset and operation management branches, facility condition assessments, concessioner evaluations)
- \$2,202,019 in prospectus development for YELL077 contract
- \$452,952 in parkwide support (winter grooming, grooming equipment replacement, PBX phone switch replacement, cultural landscape inventories, infectious disease reporting system, and parkwide safety program.

Maintenance and Facility Management **Yellowstone Environmental Program (YEP)**

- Yellowstone Park Foundation - The Comprehensive Greenhouse Gas Inventory, first developed in 2007, continued to identify goals for the park's environmental program. Staff worked with the Foundation to foster partnerships resulting in financial and informational support for instituting identified sustainability initiatives.
- Yellowstone's Environmental Coordinating Committee (YECC) – With a member from each of the park's major concessioners, NPS and Yellowstone Association, YECC helped guide the park's overall environmental program and ensured consistent messaging to all employees.

- The Green Team – Ten NPS employees made up the team, which underwent reorganization to more accurately and successfully represent all NPS employees, provide a credible contribution to the YEP, assist in carrying out the YES! Initiative, and act with full management support. Roles and responsibilities were defined and organizational leadership established.
 - Information and Education - Presented at each of the Seasonal Orientations; emailed an all- employee questionnaire seeking employee feedback on greening of Yellowstone; created and emailed a monthly green e-hint to employees and a quarterly *Greenstone Newsletter*; hosted a joint meeting with Grand Teton National Park’s Green Team at Old Faithful followed by a tour of the West Yellowstone Compost Facility; helped host and decorate the employee holiday party in a green manner; developed training for “Green Procurement of Micro Purchases” with plans to present to credit card holders in 2011.
 - Research and Development /Energy – Initiated parkwide electrical-use database (person on-sabbatical); student interns focused on feasibility of micro -hydro at Lamar Buffalo Ranch and feasibility of solar/photovoltaic at Bechler.
 - Project Management - Reviewed NPS projects for compliance with program goals and policy requirements for the NPS.

Employee Ride-Share Program – Approximately 45 employees participated in this program aimed at reducing fuel consumption, improving highway safety (by decreasing traffic), and easing parking constraints in the park. The bus was fueled with bio-diesel.

Solid Waste – The park achieved an 81% diversion rate from the landfill. This was accomplished through the following:

- West Yellowstone Compost Facility – Accepted 1,606.5 tons of park waste.
- Recycling – In partnership with the major concessioners, the park recycled 1,942 tons of commodities, including: 21.6 tons aluminum/steel, 290 tons cardboard, 10 tons electronics, 140.5 tons glass, 60.4 tons paper, 45.2 tons plastic, 62. 7 tons tires.
- Worked with MSU and the Greater Yellowstone land managers to create the bear spray recycling unit.
- Finalized a new recycling contract for more systematic, efficient set-up, pick-up and hauling. Bin colors and signage were determined.

Federal Lands Highway Program

- E-Communication – Updated weekly road construction flyer and emailed to the park’s concessioners, chambers of commerce, state travel bureaus, newspapers, motels, other federal agencies (~90 recipients), plus NPS park employees.
- Lamar River Bridge – Oversaw construction that started in late summer and continued through the winter.
- Tower Junction to Chittenden and Norris to Golden Gate road segments - Continued design alternatives.
- Norris to Madison, Phase 3 Completed – Worked alongside Federal Highway engineers while contractors constructed new alignment with two new picnic areas; removed 1.9 mile of road from Gibbon River’s edge to restore natural grade; repaired one bridge, removed one and constructed one; reclaimed 2.5 old gravel pits; regraded and restored staging site at

Gibbon Falls picnic area. NPS produced 20 signs and log kiosk; seeded entire new alignment.

- Gibbon Falls Overlook – Contractor excavated a high, rocky, hillside to create safe road, parking and pedestrian area, and stabilized historic rock walls. NPS crew built kiosk; planted numerous containerized plants; seeded overlook and entire new alignment.
- Gibbon River Reclamation - Restored 2.4 acres of wetlands after 1.9 mi. road was removed and grade restored to pre-road condition, utilizing 3,500 cubic yards of YNP compost from the West Yellowstone facility. The NPS crew planted 2,225 upland plants, 1,600 lodgepole seedlings, 17,170 wetland plants; sowed 146 lbs. grass seed, and 7 lbs. of sedge seed.

Other Projects

- Stephens Creek Nursery – Propagated 4,444 grasses, forbs and shrubs.
- Wildland Seed Collections – Made 32 collections of 20 species, totaling 43 lbs. of clean seed.
- Montana Conservation Corps – For seven days the crew helped collect native grass seed for the Northern Boundary Revegetation project.
- Tree Planting – Hand-dug local trees/transplanted to the Lake General Store, planted two large, limber pines behind Heritage and Resource Center to replace dead trees, tree-spaded local trees to the Old Faithful Visitor Education Center.
- Sign Shop - Numerous signs were constructed and routed (wood), baked (vinyl on aluminum), ordered from vendors (MUTCD), routed on aluminum (backcountry), and delivered parkwide. Northeast Entrance sign was constructed and installed. Signs for new traffic flow to reroute Norris Geyser Basin traffic were constructed and installed. New picnic area and other signs were constructed and given to the Gibbon River road contractor.
- Campground Rehab – Through this YPF funded project, an entrance kiosk and parking area was initiated at Pebble Creek Campground.
- Accessibility - Averaged 18 requests per month for park accessibility information. Sent out 42, *Accessibility in Yellowstone, A Guide for Visitors Who Use Wheelchairs* booklet.

ROADS

- Spring Opening of roads, including opening of Beartooth Pass on time.
- 27 miles of chip sealing in Yellowstone National Park.
- 6.5 miles of chip sealing in Grand Teton National Park.
- 4.5 miles of chip sealing in Devil's Tower National Monument.
- 41 miles of fog seal in Yellowstone National Park.
- Transported 350 tons within Yellowstone to proper landfills, including: non-recyclables (225 tons), contaminants (20 tons), and sludge (105 tons to date) from treatment plants.
- Demolished and hauled six trailer houses and one transit home to the landfill.
- Paved sections of Canyon area parking lots, Brink of Upper Falls Road, parking lot of new Old Faithful quad.
- Milled and paved in lower Mammoth areas.

- Milled and paved RT 10 in Mammoth (Mail Handler's cabin to 2nd parking lot of Mammoth Terraces.
- Hauled materials (sanding material and paving materials to Districts).
- Repaired portions of Mammoth to Tower Road with hot mix.

Building Projects

Major on-going contracted construction projects included:

- **Madison Waste Water Treatment Plant**

1,700 linear feet of 6" waterline was installed, backfilled and tested; 95 percent of the waste water yard piping was completed. The sludge drying beds were completed; the excavation and grading for the sludge holding pond was finished. The aeration basin was constructed in conjunction with the operations building basement. In the operations building, the basement concrete work, along with the main floor concrete slab, was completed. The exterior and interior block walls were completed and ready for the large steel trusses to be set. A large amount of the electrical and domestic plumbing was completed.



- **Stephens Creek Barn**

The design and contract was awarded for the construction of the Stephen's Creek Barn. The 9,900 square foot facility will support the long- term management goals for the Stephen's Creek Administrative Area and will greatly improve the operation, safety and support of the park's horse operation. This project was partially funded by the Yellowstone Park Foundation.



- **MAMMOTH 8-PLEX**

The contracting office granted the Mammoth 8Plex substantial completion effective 12/28/10, pending the completion of the punch list work items which included final grading & topsoil placement by May 1, 2011. Exterior siding & painting was completed in December under the cover of a heated tent. With all interior systems operational, the contractor demobilized for a planned temporary winter shutdown until the spring of 2011.



- **Old Faithful Visitor Education Center (PMIS #69189)**

Work was completed on time for the grand opening on August 25. Director Jarvis dedicated the Gold LEED rated, 26,000 square foot building, which includes space for 10,000 square feet of exhibits including dedicated space in which to exhibit artwork and other objects from the park's museum collection, a 300 seat theater, a bookstore, a lobby with interactive kiosks, classroom facilities, a geothermal research library, and a backcountry permit office.

Attendance has been up significantly at the new facility.



- **Mammoth Micro Hydro Project (ARRA Funds)** – Construction began in spring 2010. The powerhouse building has been completed and the turbine and generator was installed. The NPS Solicitor's Office and the utility company, Northwestern Energy, are working on the interconnection agreement. Once this is finalized, the construction will be completed and the unit brought on line.



Work on the power house



Installed turbine generator

Craft Shop Accomplishments

- Painted exteriors of nine quarters, including the three- story apartment building #70.
- Construction of partition walls and subsequent painting the interior of both YACC dorms.
- Construction of two vault toilets at Artist Point.
- Turned over seven quarters.
- Replaced the roof on the Historic Bechler Barn.
- Rehabbed the water system for Stephen's Creek.
- Re-roofed North District Maintenance Building.
- Replaced the underground fuel tank at Fishing Bridge VC and Museum.
- Installed new thermal pane windows in 13 Mission 66 housing units. In addition, crews added attic insulation to these same units.
- Constructed two Port-a-Dorms in the Tower Resident's area, eliminating two trailers.
- Completed the stabilization of the Historic Barn at Tower.
- Completed the rehabilitation of the Mammoth Jail facility.

- Renovated the interior of the Structural Fire Cache.
- Mold abatement at five quarters in Canyon and five in Mammoth.
- Completed the renovations of the Grant Marina Lift Station Facility.
- Designed and installed a water vapor extraction system for the Canyon Ranger Station.
- Rehabilitated the Harebell Backcountry Cabin.
- Cyclic Roofing Projects—Re-roofed the large, high roof on the Fire Cache (MA23) as well as 11 Mammoth quarters. In addition, re-roofed three Lift Station roofs as an ARRA project.
- Cyclic Painting Projects—Painted seven Mammoth buildings and four Tower buildings, plus the Indian Creek Campground warming hut and the exterior of the Grant Visitor Center.

Asset Management

- Yellowstone began the execution of the park's Park Asset Management Plan (PAMP) which is due for its five year update. We had one week training in August to begin gathering of the park's budget, location, etc. data to begin the process. We hope to have this working document completed soon.
- The FMSS team was sent to AMK Ranch in Grand Teton National Park to do condition assessments on all of AMK's assets. Yellowstone has been asked to do this to help out the small parks in the newly established HUBS.
- During the summer season, a three-person condition assessment team performed a comprehensive condition assessment on 250+ miles of NPS trails. Deficiency work orders were created and estimated in CESS and then entered into the FMSS database.
- The interpretive and telecommunication divisions began to take part in the FMSS program. The FMSS team was asked to help establish each division in the program and assist in entering data, work orders, etc. Each division has many assets that need to be captured and entered into FMSS. Solid waste will soon be added to FMSS as well.
- All new facility projects in the Service-wide Comprehensive Call (SCC) were entered into the Project Scoping Tool (PST) and received a DOI score.
- The park continues to perform quality assurance/quality control on the FMSS data.

District Accomplishments

Mammoth

- a) Stopped Pebble Creek from washing out the Northeast Entrance road by hauling in rip- rap to stabilize the creek bank.
- b) Built a bypass road at Stephens Creek around the new barn and hay shed.
- c) Cleaned out culverts in the Gardner River Canyon.
- d) Cleared parking lots and sanded area to minimize slips, trips, and falls last winter.

- e) Replaced one culvert at Lost Creek.
- f) Cleaned out sand build-up from under the wooden guardrail between the Upper terrace and the YCC camp entrance.

Canyon/Norris

- a) Installed new water shut off valves and meters in Norris Campground and Canyon Trailer Park.
- b) Norris Vault Re-habbed (6).
- c) New storm windows installed in quarters #801 and #825.
- d) Canyon Maintenance Shop painted.
- e) Ditch work and culvert cleaning on Blanding and Cascade Hills.

Lake

- a) Designed, built and deployed 10 informational buoys (4' diameter x 8' tall) Lake-wide.
- b) Installed new exit gate at East Entrance.
- c) Replaced 60' culvert at Gull Point.
- d) Got the area up and running with only 2 Utility Systems Operators and no accidents.
- e) Major assistance with the Fishing Bridge well project, insuring a safe dig. Assisted with the pitless adapter installation.
- f) Large repair of the Lake Ranger Station roof.
- g) Removed wood shingles and installed Core Ten metal roofing on the Cabin Creek cabin. Replaced heavy duty cricket and chimney on this cabin as well.
- h) Painted large buildings– 788, 786, 659, 647, 803, 801, and 672-with the new Genie lift.
- i) Crew worked 661 days (as of 9/15/10) without a lost time accident.

Grant Village

- a) Removed one housing trailer and the cook shack trailer; replaced them with two housing units from Old Faithful.
- b) Windows and doors installed in Apartment building 633; finished up the siding on it as well.
- c) Hired two new Utility Systems Operators.
- d) Utilized two utility folks from other districts to make it through the busy months at the water treatment plant.

West District

- a) No serious injuries for FY 10.
- b) The Old Faithful Visitor opened in August as planned.
- c) All heating systems in the West District were serviced and repaired using district personnel and a contractor.
- d) A park wide road crew was hired and got started on a three + year project which consists of clearing vegetation from roadsides, cleaning culverts, and guard rail repair/replacement.
- e) All water backflow devices were tested in the West District for the first time.

- f) North District solid waste was combined with the West District's north route.
- g) The Old Faithful roadside truck was replaced with a new truck that has been outfitted to comply with the park standard.

Resource Stewardship

Budget and Personnel

The Yellowstone Center for Resources was allocated a FY2010 base operating budget of \$5,361,750 with a staff of 71 full-time-equivalent employees. The base allocation was 61 percent of the total YCR budget for FY10. Additional monies came from Recreation Fee Demonstration funds, the Fishing Fee program, the Federal Lands Highway Program, the NPS Servicewide Consolidated Call, private sources, other National Park Service funds, and other federal funds. Forty-nine assistance agreements and task orders were processed in FY10, for approximately \$2,020,600 in partnership agreements activity.

Natural Resources

Air Quality

No National Ambient Air Quality Standards were exceeded in Yellowstone in 2010 for the four measured criteria pollutants: ozone, particulate matter, nitrogen oxides, and carbon monoxide. The draft Air Quality in National Parks 2009 Annual Performance and Progress Report indicated that air quality neither deteriorated nor improved in the park from 1999 through 2008. (The 2010 report is not yet available.) Nitrogen deposition, however, continues to be of significant concern because it is occurring at levels known to be harmful to sensitive resources, including alpine areas, wetlands, arid areas, and grasslands. NO₂ is at about 50% of the standard (100 ppb as the 98th percentile over 3-years) at the West Entrance and below 10 ppb at Old Faithful. The nitrogen deposition results from emissions from vehicles, power plants, industry, agriculture, and fires.

Air quality is also monitored at the West Entrance and at Old Faithful during the winter because of concern about the effects of oversnow vehicles. Fewer snowmobiles entering the park and reduced emissions by snowmobiles have greatly reduced carbon monoxide and particulate matter concentrations since 2003. Although air quality in the park meets Environmental Protection Agency standards for protection of human health, carbon monoxide levels are sometimes above natural regional background levels in areas near vehicle routes, especially during the winter.

Geology

Earthquakes in Yellowstone have ranged from 872 to 3,172 earthquakes per year over the last ten years. About 3,254 earthquakes were detected in the park in 2010. A swarm of approximately 2,400 earthquakes occurred on the Madison plateau from 15 January through mid February. The swarm was located about 10 miles (16 km) northwest of Old Faithful. The two largest earthquakes were magnitude 3.7 and 3.8 and occurred after 11 PM MST on January 20, 2010. Both were felt throughout the park and in surrounding communities in Wyoming, Montana, and Idaho.

No basin-wide changes in geothermal activity were noted in 2010. The Old Faithful eruption interval remained at 90 to 91 minutes and Steamboat Geyser did not have a major eruption.

Echinus Geyser at Norris continued a period of limited activity, with only eight eruptions noted through early December, 2010.

Work continued on the park's geothermal monitoring program with progress made in documenting the status and trends of the geothermal system by measuring the total amount of thermal water and the total heat output for selected geyser basins. Aircraft and helicopter thermal infrared images are being used to document natural and anthropogenic changes in the hydrothermal areas.

Vegetation

Inventory and monitoring. Park staff has met the servicewide inventory and monitoring goal of documenting at least 90% of the park's 1,346 vascular plant species and incorporating the information into the NPSpecies biodiversity database, which now includes the approximately 10,241 specimens in the park's herbarium. During the 2010 field season, at least 51 vascular plant specimens were collected for addition to the herbarium.

To prevent impacts on rare plant populations, park staff conducts surveys prior to construction projects, trail re-routes, and other activities that disturb soil. In addition to complying with statutory requirements, these surveys collect valuable data: 144 sites were documented during 2010 with GIS data for plants that are rare in the park and Wyoming species of special concern. Summer fieldwork for comprehensive planning resource inventories took place primarily in the Old Faithful development area, where 608 sites containing 21 rare species have now been documented and in the Lake development area where 13 sites containing 2 rare plant species were documented. Park staff also continued rare plant surveys for 10 rare plant species in the Mammoth/Gardiner development areas.

Nonnative plants. No new nonnative species were reported in the park in 2010, but many of the 218 known established nonnative species continued expanding their ranges. A total of more than 7,210 hours were devoted to exotic vegetation identification and control by 26 members of the park staff, 3 Student Conservation Association interns, 10 full-time summer volunteers, 4 Montana Conservation Corp crews, and a crew from the NPS Exotic Plant Management Team, and dozens of other individual volunteers and groups. Of the approximately 20,290 acres in the park surveyed for invasive plants during 2010, 600 acres contained nonnative vegetation. A total of 105 acres in the park were treated for invasive plants using a combination of chemical and mechanical removal methods

With assistance from a contractor provided by the Greater Yellowstone Coordinating Committee, park staff conducted three inspections for invasive plants at sand and gravel pits in the greater Yellowstone area, resulting in the approval of two pits for use of their material in the park. Park staff and the GYCC also worked with seven cooperative weed management areas to map and treat weeds on land adjacent to the park; monitor biological control release sites; and support weed education efforts.

Woody Vegetation. The status of woody vegetation on the northern range (aspen, willow, and cottonwood) as it has been affected by changing elk population levels and wolf reintroduction continued to support diverse research opportunities in 2010, including the completion of a ground-based effort to map, measure, and taxonomically classify willow communities on 378 km (262 miles) of selected stream drainages on Yellowstone's northern range.

Gardiner Basin restoration. As part of the long-term project to restore former agricultural fields along the Yellowstone River corridor inside the park's north boundary, 50 acres were treated with herbicides and seeded with preparatory cover crops with financial support from

Recreation Fee Demonstration funds. The sites are fenced to exclude wildlife while native vegetation is re-established.

Aquatic Resources

The top priorities for the park's Fisheries Program are the preservation of Yellowstone cutthroat trout (YCT) in Yellowstone Lake and restoration of fluvial populations of native trout, many of which have been lost because of nonnative species introductions.

Yellowstone cutthroat trout preservation. The YCT population in the Yellowstone Lake ecosystem has declined substantially since 1988 because of nonnative lake trout that prey on it and compete with it for food, the exotic parasite that causes whirling disease, and low water flows caused by a series of drought years. Lake trout appear insusceptible to the whirling disease that has severely reduced cutthroat trout abundance in Pelican Creek, a tributary to Yellowstone Lake. Although approximately 41% of the YCT in the 2010 catch were greater than 330 mm in total length, recent catches have lacked fish in the 200 to 250 mm range—fish that will continue into adulthood.

Lake trout removal. NPS staff has removed more than 557,000 lake trout from Yellowstone Lake since the effort began in 1995, including more than 112,000 in 2010. The largest lake trout recorded in the park (26.25 pounds) was caught in 2009. To augment the lake trout removal efforts of Yellowstone staff, the National Park Service contracted with Hickey Brothers Fisheries, LLC, of Baileys Harbor, Wisconsin, to use their research vessel, which can set 18,000 to 27,000 feet of gill net a day in Yellowstone Lake. During their ten-week contract in 2010, they caught more than 31,600 lake trout. The combined effort of contractors and NPS staff removed nearly 150,000 lake trout from Yellowstone Lake in 2010.

YCT restoration on the northern range. As a result of recent invasions of Slough and Soda Butte creeks by rainbow trout, planning continued in 2010 to save the YCT in these drainages, including the possible construction of fish barriers in both creeks. As in past years, park staff participated in a multi-agency effort that significantly reduced the brook trout in Soda Butte Creek.

Westslope cutthroat trout. After receiving piscicide treatments to remove the nonnative fish, High Lake has been stocked annually since 2007 with westslope cutthroat trout from the two known genetically pure westslope cutthroat trout populations, one in the park and the other from an upper Missouri River brood stock hatchery. Subsequent monitoring indicates that the stocking has been successful with the first documentation of natural reproduction occurring in 2010. An abundance of fry were visible in the inlet streams and various locations around the lake margin, adult fish were seen in the littoral zone feeding on aquatic invertebrates, and otters and other piscivorous wildlife have returned. Westslope cutthroat trout restoration in the East Fork Specimen Creek continued in 2010 with the beginning of restocking operations on the stream. Additional efforts to improve the integrity of the fish barrier that has been constructed on East Fork Specimen Creek were also conducted in 2010. Despite delays caused by the 2007 Owl Fire the project is progressing toward successful completion with restocking expected to conclude in 2012.

Arctic grayling. Competition from introduced fish species eliminated the fluvial Arctic grayling that were native to park waters by the 1950s, and the lower reaches of Grayling Creek, where grayling were most abundant, were submerged by the completion of the Hebgen Dam. The uppermost reaches of Grayling Creek, considered a potential site for fluvial grayling restoration, are occupied by brown trout and hybridized cutthroats. A restoration project on Grayling Creek

was included as a potential action in the Native Fish Conservation Plan Environmental Assessment in progress in 2010.

Aquatic nuisance species. In addition to lake trout, two nonnative species are having a significant detrimental effect on the park's aquatic ecology: the New Zealand mud snail and the parasite that causes whirling disease in fish. Concern for zebra and quagga mussels invading the park continues to grow as other parks are now spending millions of dollars to control infestations. Park staff has increased their vigilance in attempting to intercept watercraft from source locations and educate visitors about the problem, and they purchased a mobile cleaning unit in 2010. In 2009, a new invasive species was discovered in the Boiling River soaking area adjacent to the Gardner River. The red-rimmed melania, *Melanoides tuberculatus*, is a small snail native to tropical Africa and Asia that was imported to the United States by the aquarium trade starting in the 1930s. In 2010, eighteen popular hot springs were surveyed for the snail's presence, primarily in the Madison and Bechler river basins. Snails were collected from each surveyed site and identified. Red-rimmed melania was not detected in any of the surveyed areas outside the Gardner River drainage; they generally tolerate a very narrow temperature range and are not likely to live downstream of the Boiling River during winter months but could potentially still be established in other thermally-influenced water within the park.

Water quality. Water temperature, dissolved oxygen, pH, specific conductance, turbidity, and total suspended solids are monitored monthly at 11 stream and 7 lake sites in the park. Chemical parameters are also collected from 9 of the stream sites. In 2010, three of the stream sites did not meet EPA and/or state standards for pH, turbidity, or temperature in at least one monthly sampling. However, these exceedences are likely the result of natural rather than anthropogenic factors. Many stream sites have upstream thermal inputs that affect pH and water temperature. As a result of elevated metal concentrations from previous mining activity upstream of the park, dissolved and total metals (arsenic, copper, iron, and selenium) in the water and sediment of Soda Butte Creek are measured at the park boundary during its annual high and low flow periods. Although the metal concentrations appear negligible, the water is at risk from upstream contamination during an extreme flood event. Samples taken from the site at Soda Butte Creek exceeded EPA and state standards for dissolved iron during two visits in 2009 and one visit in 2010. State and federal agencies are participating in a long-term plan to remove the mine tailings from the streambed.

Bears

Bear foods monitoring. The annual availability and abundance of native bear foods has a strong influence on grizzly bear cub production and survival, and the number of incidents in which bears attempt to obtain human anthropogenic foods. Park staff monitors the availability of some key grizzly bear food sources: winter-killed carcasses, spawning cutthroat trout, and whitebark pine seeds. In 2010, the availability of high quality, concentrated bear foods was below average during the spring and early summer seasons, average during mid-summer, and poor during late summer and fall. During spring, winter-killed ungulate carcasses were scarce on both the northern ungulate winter range and in higher elevation thermally influenced winter range. Although very few spawning cutthroat trout were counted in tributary streams of Yellowstone Lake during stream surveys, bears around the lake found other natural foods. In late spring and early summer, grizzly bears preyed extensively on newborn elk calves. Vegetable bear foods

were scarce throughout the summer and the abundance of whitebark pine seeds, available in the fall, was below the long-term average.

Bear–human conflicts. Despite the poor food year for bears, sanitation practices intended to prevent bears from obtaining human foods and garbage helped limit the number of bear-human conflicts in the park to 11 in 2010. Bears obtained human foods or garbage in six incidents and damaged property without obtaining anthropogenic food in five incidents. As a result of these conflicts one grizzly bear and two black bears were removed from the park in management actions. The grizzly bear was sent to a zoo and the black bears were euthanized.

Grizzly bear reproduction and mortality. The number of female grizzlies in the park that produce cubs has been relatively stable for more than a decade, suggesting that the park's grizzly bear population may have reached ecological carrying capacity. In 2010, 21 female grizzlies in the park had a total of at least 40 cubs. Of the six grizzly bear mortalities recorded in the park in 2010, three appeared to result from natural causes. About 10% to 15% of the grizzly bears in the greater Yellowstone area are radio-collared to monitor bear cub production, survival, home range sizes, activity patterns, food habits, and habitat use.

Status of the greater Yellowstone grizzly population. The demographic measures required for delisting the greater Yellowstone area (GYA) grizzly bear population as a threatened species under the Endangered Species Act, including the number of reproducing females, distribution of reproducing females, and mortality rates, were met in 2010. However, allowable mortality of adult male grizzlies was exceeded. The estimated GYA grizzly bear population was 603. Although the U.S. Fish and Wildlife Service concluded in 2007 that the greater Yellowstone area grizzly bear population had recovered sufficient numbers and distribution to be removed from the list of threatened species under the Endangered Species Act, a lawsuit filed by the Greater Yellowstone Coalition led to a court order in September 2009 to relist the species. On January 15, 2010, the Department of Justice and the U.S. Fish and Wildlife Service filed an appeal of the order in the Ninth Circuit Court in San Francisco. A decision on the appeal will likely be made sometime in 2011.

Birds

Bird monitoring in Yellowstone continued to focus on raptors, wetland birds, and passerine or near passerine birds. In 2010 the program was expanded to include raptor species that have not been previously monitored, like red-tailed hawks, golden eagles, and Swainson's hawks.

Peregrine falcons. Of the 26 known eyries monitored for evidence of breeding, 16 were occupied by a breeding pair, 12 of which fledged a total of 27 young. For the first time, 7 peregrine nest sites were entered during August and September to collect eggshell fragments and prey remains. Eggshell thickness, an indicator of environmental contaminants, was within the normal range of healthy peregrine. Prey remains found in nest sites reveal a highly varied diet. Feathers from Franklin's Gull and other uncommon species were also found in the nests. This may indicate more frequent occurrence of these species than is usually reported.

Bald eagles. Of the 18 active bald eagle nests, nine fledged a total of 12 eaglets. The nine nests that did not produce fledglings were located in the Yellowstone Lake area, where reproduction has decreased in recent years, possibly because of reductions in cutthroat trout abundance or because of human disturbance.

Osprey. Of the 30 active osprey nests, 16 fledged a total of 36 young. The park's osprey population has been increasing since 2003. Only five osprey pairs nested on Yellowstone Lake

and, like the bald eagles nesting there, none produced fledglings. Studies are underway to examine the availability of fish and the nest success of osprey and bald eagles in the Yellowstone Lake area in comparison to other parts of the park.

Trumpeter swans. Only one nest attempt was made during the breeding season in 2010, but it failed during the incubation stage likely due to early-season flooding. During the mid-winter survey we counted 18 adults and 5 cygnets within the park; in the autumn we counted 3 adults and no cygnets within the park.

Common loons were surveyed at 11 previously occupied sites in July and August. In 2010 seventeen adults and three loonlets were observed at nine park lakes. The number of adults observed in YNP remains stable. However, nesting pairs and fledglings have decreased since 1987.

Other surveys and studies. Park staff conducted the annual survey of colonial nesting birds on the Molly Islands, continued a study of willow-songbird relationships that was initiated by Montana State University to establish a long-term songbird dataset, and set up transects to conduct surveys in areas that had recently undergone forest fire. During the annual breeding bird survey, which is an international effort to track population trends over time, 2,097 birds of 75 species were documented on three routes in the park.

Ungulates

Bison. Park staff participated for the 11th year in the Interagency Bison Management Plan with the state of Montana and the U.S. Department of Agriculture Animal and Plant Health Inspection Service and Forest Service. The plan is designed to manage the risk of brucellosis transmission from bison to cattle, conserve the ecological role of the bison population in the ecosystem, and allow for gradually increased tolerance of bison outside the park on national forest land. Although few bison migrated to lower elevation ranges along the park boundary year during the winter of 2009–2010, approximately 708 bison approached the west boundary in the spring, resulting in up to 600 bison on ranges outside the park in mid-May. A large interagency operation moved the bison back within the park and no bison had to be removed to meet brucellosis risk management goals. Four bison were harvested outside the park in Montana by licensed state and tribal hunters. The population size was estimated at 3,900 based on aerial surveys in June and July, compared to 3,300 bison in summer 2009 and 3,000 adult and yearling bison in late winter 2010.

Elk. Yellowstone's largest elk herd winters on along and north of the park's Montana boundary. The Northern Yellowstone Cooperative Wildlife Working Group, which includes park staff and representatives from Montana Fish, Wildlife and Parks, the USFS and the USGS, conducts aerial surveys of this northern Yellowstone elk population each winter. The winter count, which was approximately 17,000 in 1995, has fluctuated between 6,000 and 9,000 since 2003 and was 6,070 in 2010. The decline has been attributed to predation by reintroduced wolves, a growing bear population, hunter harvest, and possibly drought-related effects on pregnancy and survival. The state of Montana has reduced the number of antlerless permits issued in recent years limiting the impact of hunting on population size.

Mule deer. Aerial surveys conducted in the spring of 2009 by the Northern Yellowstone Cooperative Wildlife Working Group recorded 2,154 mule deer on the northern range in and outside the park, the third highest count since 1996. No count was conducted in 2010. While the

relative distribution of mule deer across their winter range has remained similar over the last two decades, the population appears to have increased in recent years.

Mountain goats. Descendants of mountain goats introduced in Montana during the 1940s and 1950s have colonized northern areas of the park; aerial counts of goats inside or within one kilometer of the park have increased from 24 to 178 since 1997. The total population in that surveyed area was estimated to be 200 to 300 goats in 2009. This has raised concerns about the apparent effects on native alpine vegetation and competition with the native bighorn sheep. Studies by Idaho State University and the National Park Service during 2008–2010 suggest goats are affecting the soil chemistry of sites they inhabit by increasing the availability of soil nitrogen through deposition of urine and feces. Soil rockiness may be increasing slightly over time at sites with high goat presence, but no large-scale effects have been detected so far with respect to vegetation. In 2010, the National Park Service formed a partnership with Montana State University and other federal and state agencies to develop a long-term research program for bighorn sheep and mountain goats. The partners developed Geographic Information System capabilities and data layers for the greater Yellowstone ecosystem, developed mountain goat and bighorn sheep habitat models, and identified sites for field studies of bighorn sheep and mountain goat herds during the next 3–5 years.

Wolves

Population status. While the total wolf count in the greater Yellowstone area has continued to increase since reintroduction began in 1995, reaching 478 in 2010, the number of wolves in Yellowstone National Park has trended downward since reaching 174 in 2003. As of the end of 2010, 97 wolves were known to be occupying territories located mostly in Yellowstone, and most of them belonged to one of 11 packs which ranged in size from 3 to 16. Intra-pack fighting, malnutrition, and mange are the most likely causes of the decline within the park. Sarcopic mange is an infectious skin disease caused by a mite that was introduced in the West in the early 1900s to reduce wolf and coyote populations; it is not necessarily fatal but can make an animal more vulnerable to death from other causes.

With a total of more than 1,600 wolves in Idaho, Montana, and Wyoming, the Northern Rocky Mountain recovery areas have met the demographic criteria established for a recovered wolf population, and in 2009 the U.S. Fish and Wildlife Service removed the gray wolf from the endangered species list in Idaho and Montana, which had each prepared wolf management plans that were approved by the USFWS.

Wolf management activities. About one third of the wolves in the park wear radio collars for research and monitoring purposes, including 18 wolves that were captured and collared in 2010. Wolf management activities included closing the area around two den sites and one rendezvous site.

Predation. Park staff detected 268 wolf kills in 2010, including 211 elk (79%), 25 bison (9%), and 7 deer (3%), as well as 4 wolves, 2 pronghorn, 4 coyotes, 2 ravens, 2 moose, and 10 unknown prey. Although the number of elk killed per wolf has declined in recent years, the kilograms consumed per wolf per day relatively stable since 1995.

Cultural Resources

Archeology

The University of Montana Archeological Field School. Assisted by YCR staff through an agreement with the Rocky Mountain Cooperative Ecosystem Study Unit, the field school inventoried several areas in the park in 2010. Field crews surveyed 26 miles of previously-unrecorded lake shoreline between the Nine Mile trail head and the Trail Creek Cabin, visiting 46 sites along the east shore of Yellowstone Lake. They revisited almost 20 miles of the south shoreline to conduct condition assessments of approximately 35 known sites. In addition to site identification, the university evaluated 24 sites on the east shore to determine their eligibility for listing on the National Register of Historic Places. Nearly 600 artifacts were located at these sites.

Approximately 385 acres between the Bridge Bay area, through the Lake developed area and including the utility corridor connecting the Lake developed area to the Fishing Bridge developed area were surveyed in 2010 for historic and precontact archeological sites. There were also seven sites visited and evaluated for National Register eligibility, including six at Lake Lodge and one at Bridge Bay.

Developed area inventories. Facilitated by a cooperative agreement through the Rocky Mountain Cooperative Ecosystem Study Unit, Rosenberg Historical Consultants, a partner of the Office of the Wyoming State Archeologist, conducted intense archival research to develop the historic context within which to evaluate the significance of the views and trails in the Grand Canyon of the Yellowstone River. In 2010 the park determined that the Grand Canyon of the Yellowstone Historic District is eligible for the National Register of Historic Places. The Wyoming State Historic Preservation Office concurred with the park's determination.

Golden Gate to Norris Junction road reconstruction. With preparations underway to widen a section of the Grand Loop Road that bisects five precontact archeological sites associated with obsidian procurement near Obsidian Cliff, park staff has worked with the Office of the Wyoming State Archeologist and the Wyoming State Historic Preservation Office to develop data recovery plans for the sites. The excavation work was begun in 2010. Twenty shovel tests were excavated within the area along the road to determine the most productive placement of excavation units. Over 10,000 chipped stone artifacts were recovered, most of which were flakes from core reduction and various stages of tool production. As expected, the majority of lithic material was obsidian, although some chert and quartzite was recovered. Diagnostic tools were recovered which indicate the site was used from PaleoIndian to Late Prehistoric periods.

Ethnography

YCR staff worked with the interpretive staff to develop a new wayside exhibit on the Nez Perce National Historic Trail that was installed in 2010. In July, Shoshone-Bannock representatives met with YCR staff to discuss the Old Faithful comprehensive planning effort. A traditional use study for the Commanche tribe was completed and traditional use studies for the Salish-Kootenai and Kiowa tribe are ongoing. New website content related to the Nez Perce was developed for the park's Science Learning Center website.

Historic Structures

Assistance provided by park volunteers, the Montana and Wyoming Historic Preservation Offices, and through agreements with the Montana Preservation Alliance, the University of Montana Anthropology Heritage Resource Program, and the Rocky Mountains Cooperative Ecosystem Studies Unit enabled park staff to address these issues in regard to the park's historic structures at many sites during 2010.

Old Faithful Haynes Photo Shop. Consultation with the Wyoming State Historic Preservation Office (WYSHPO) conducted in 2009-2010 resulted in the development of a plan to separate the original structure from the later addition and to move the original structure to a storage area until the existing foundation of the temporary visitor's center could be prepared for placement of the historic photo shop. The NPS was also able to salvage the greater portion of the addition wing for future use. The final phase of the relocation and re-use of the Old Faithful Haynes Photo Shop will occur in 2011.

Mission 66—Mammoth housing. Park staff is conducting a comprehensive study to develop the historic context for the Mission 66 Era in Yellowstone. In 2010 managers decided to evaluate the 40 Mission 66 housing units in Mammoth prior to the completion of the study, due to the need for energy efficient windows and doors, and the abatement of mold in some units.

Fire Detection and Alarm Systems in Historic Structures. In 2010, Yellowstone National Park began to upgrade or replace fire alarm systems (i.e. smoke and heat detectors, pull stations, horns, strobes, etc.) in park buildings that receive high use. Many of these buildings are historic and a few are National Historic Landmarks.

Yellowstone Lake Fish Hatchery. In 2010, staff began in-kind repairs and stabilization for the Fish Hatchery Building, located within the Lake Historic District and a principal contributing structure to the proposed Lake Fish Hatchery Historic District.

Rehabilitation of Fox Creek Backcountry Patrol Cabin. Fox Creek patrol cabin is located along the south boundary of Yellowstone Park approximately 18 miles east of the south entrance. Work completed in 2010 was in-kind replacement or repairs.

Trails Documentation. Although not commonly thought of as structures, Yellowstone's system of backcountry trails was constructed, to varying degrees, and is maintained on a regular schedule. Not counting boardwalks or front country trails, Yellowstone has over 1000 miles of backcountry trails leading to 293 campsites. In 2010 Yellowstone began a multi-year, phased project to 1) conduct archival research and draft a historic context for all of the types of trails in the park, 2) plan for future documentation of the trails park-wide, and 3) submit a National Register multiple property document with which to evaluate the trails in the park.

Yellowstone Heritage and Research Center

Assisting researchers. The Yellowstone Heritage and Research Center in Gardiner, Montana, houses the park's archives and library collection and most of its museum collections—several million items that document the cultural and natural history of the park. During 2010, HRC staff responded to 833 inquiries regarding the archives, 526 from NPS employees, including on-site visits, telephone, email, and written research requests. They also helped more than 100 researchers with historical photographs and other inquiries about the museum collection; assisted about 2,000 library patrons; and responded to hundreds of questions via phone and email. For the

fifth summer, the librarians provided a bookmobile service to make the library's collections and resources more accessible to NPS and Yellowstone Association employees in the park's interior.

Acquisitions. In addition to cataloging almost 6,600 items from the museum collections backlog, HRC staff processed 57 new accessions in 2010, including natural history specimens, several early park photo albums and skulls from Phase One of the Cougar Project. Collections added to the archives in 2010 included diaries from a father and daughter who toured the park in 1895; writings and ephemera of the OTO Ranch and founder, Dick Randall; and papers from the Link family, including records from the Gardiner Electric Light and Water Company, the Blue J Café, and Red Cross activities in Gardiner during World War II. The library added 34 microform items, 295 books, 2 DVDs, and 30 maps relating to various Yellowstone topics.

Collection conservation. During 2010 staff cataloged and rehoused numerous collections for better long-term conservation and improved exhibit conditions at the museum. They continued to improve preventive maintenance of the collections and incorporate much-needed planning documents such as an aggressive pest monitoring and preventive maintenance program for the park's historic vehicle collection, and a Museum Emergency Operations Plan (MEOP) for the HRC and its collections. The MEOP will provide important guidance to both staff and first responders in the event of an emergency affecting the collections. Staff also updated the park's Scope of Collections Statement which provides much-needed guidance to insure that only items important to the park's mission statement, history and science are added to the collections. The park also hired its first professional archivist to oversee Yellowstone's archives collections and to work with the National Archives and Records Administration to insure standards are met.

Historical research. In 2010 the park historian completed "This Modern Saratoga of the Wilderness!": A History of Mammoth Hot Springs and the Mammoth Village in Yellowstone National Park. He also continued to work on a long-term project, a book on "The History of Animals of the Greater Yellowstone Region," presented eight outreach programs on historical themes, and assisted park staff and outside researchers in finding answers to their questions about Yellowstone history.

Environmental Quality

In 2010, a major focus of the Environmental Compliance was continuing to work with park staff to improve how compliance is integrated efficiently into the project planning process. The branch was involved in:

- Implementing the Environmental Assessment (EA) for the Wireless Communication Services Plan through the continued involvement on the Telecommunications Committee.
- Making significant progress on drafting the EA for the Norris to Golden Gate road reconstruction project.
- Assisting the Fisheries Branch in the planning, preparation, and consultation necessary for the release of the Native Fish Conservation Plan/EA under an aggressive schedule.
- Making significant progress on drafting the EA for the North Entrance Project which proposes to improve traffic flow and safety for visitors, employees, contractors, and local residents entering and exiting the park.
- Beginning the drafting an EA for the Isa Lake Bridge reconstruction project

- Coordinating with Grand Teton National Park and the Denver Service Center in the scoping and planning process for the Snake River Headwaters Wild & Scenic Comprehensive River Management Plan. This work involved the identification of Outstandingly Remarkable Values (ORVs) for the designated segments. ORVs included fisheries, cultural resources and wildlife.
- Forming an interdisciplinary team with the intent of overseeing the preparation of an Environmental Assessment (EA) for Yellowstone's participation in the National Ecological Observatory Network, to monitor the effects of climate change on a nationwide scale.
- Assisting other park staff in preparation of the Old Faithful and Lake Comprehensive Plans/EAs as well as implementation of the Tower-Roosevelt Comprehensive Plan.
- Completing approximately thirty National Environmental Policy Act Categorical Exclusion documents for projects such as fiber optic cable placement, culvert replacements, dataline installation, and Old Faithful site rehabilitations.
- Completing five Compliance Standard Operating Procedures and associated programmatic categorical exclusions in an effort to streamline project compliance.
- Completing approximately thirty Section 106 National Historic Preservation Act consultations with State Historic Preservation Officers for projects affecting historic properties in the park, including upgrades to the Lake Fish Hatchery Building, relocation of the Old Faithful Haynes Photo Shop, upgrades to windows in Mission 66 housing located in Mammoth and Mammoth Parking Improvements.

The Environmental Quality Branch also continues to provide assistance, educate, and inform park employees, contractors, and partners about the NEPA process to establish a better understanding and appreciation of this important Act as it relates to the protection of Yellowstone's natural and cultural resources.

Professional Support

Spatial Analysis

The Spatial Analysis Center provides a variety of GPS (global positioning system) and GIS (geographic information system) services to park staff and cooperators by interpreting technology and technical data to suit a variety of information needs. Major achievements in 2010 included:

Recycling, Waste, and Bear-Resistant Food Container Inventory. The location of existing recycling containers was originally requested by Maintenance staff for use in a new recycling contract. Nearly 700 waste containers, 130 bear boxes, and 230 recycling containers were inventoried. By gathering together these data points and combining them with other infrastructure, managers and contractors can determine the best location for future containers, or consolidate existing facilities.

Spatial database of park utilities. SAC staff worked with Maintenance staff and collected data through fieldwork, interviews, and paper plans to map utilities in all park developed areas and link them to the Facilities Management Software System database. By the end of 2010, a total of over 4,000 water features and 2,000 sewer features had been mapped. This includes 110 miles of water lines and 74 miles of sewer lines.

Spatial database of park buildings, roads, and bridges. SAC personnel worked with rangers, dispatchers, and coordinated with GIS staff of five counties in three states to compile road lines

that are spatially correct, addressed, and named for the entire park. This information can then be used to implement and maintain an enhanced 911 (e911) system.

Computer models of developed areas. staff completed three-dimensional models for the park areas for use in environmental assessments, including buildings, trees, and terrain. GIS staff also supported the EA process by supplying planners with maps and analyses of the Old Faithful and Lake Comprehensive Plans and the Mammoth charrette. Enabling users to view the consequences of different planning scenarios on the landscape increases the likelihood that everyone will understand the proposals and accurately foresee the end results.

Exotic plants: staff worked with Resource Management to improve the quality of the spatial data on exotic plant locations throughout the park and the consistency of reports from different areas, which will improve the analysis of monitoring data and measurements of the efficacy of control efforts.

Wildland fires: staff provided current maps of fires in the park for fire crews, the Public Affairs Office, and the park's website.

Project-specific maps: staff helped produce an analysis of winter forage availability for bison based on satellite and climate data and an analysis of the proximity of grizzly bears, occupied campsites, and hikers based on data from GPS collars, hand-held GPS units, and the backcountry campsite database. SAC staff worked with the Fisheries and Aquatic Sciences program to map Grayling Creek by delineating the main stem, tributaries, other significant bodies of water (ponds, springs, and wetlands), and barriers, as well as collect width and depth data at specific locations along each tributary; digitized backcountry lake data by inputting records on chemical information, aquatic plants, plankton, invertebrates, and fish and inking them to maps of individual lakes.

Research Permits

Yellowstone's Research Permit Office (RPO) issues permits to and monitors the activities of approximately 200 research projects each year, many of them conducted by scientists who want to study the park's geothermal resources, active caldera, microbes, or the large and complex predator-prey system. In 2010, the RPO received approximately 70 permit inquiries and processed 27 new project requests. They assisted 15 research groups in the field, which helps ensure that the participants use minimum impact research techniques and that their efforts do not alter park resources. Among those whose projects addressed issues of particular interest to park management were a group from University of Wyoming investigating hybridization of white and Engelmann spruce; University of Montana and Wyoming State archeologists who inventoried road corridors and developed areas for evidence of prehistoric use and/or occupation; and Synthetic Genomics Inc, a research group trying to identify microorganisms useful in biofuels production.

2010 was also the first year of a new web-based application called the Yellowstone Researcher Check-in that allows researchers to post field itineraries online, instead of calling each park district to notify rangers of their plans. This will assist rangers and YCR staff in monitoring research activities and communicating with researchers while they are in the park.

Benefits Sharing

On March 5, 2010, NPS Deputy Director Daniel Wenk signed the Record of Decision (ROD) for the Benefits-Sharing Final Environmental Impact Statement (EIS), concluding a decade-long compliance process. The ROD announced the decision to implement benefits-sharing agreements with select scientists who conduct research in National Park System units. Such agreements could return benefits to a park and the public if the research leads to the development of commercially valuable products or services. Benefits-sharing agreements could provide parks with scientific benefits, in-kind services, royalties or other monetary benefits. The EIS proposed that benefits would be used for scientific purposes to conserve resources protected and managed by the NPS.

Following release of the ROD, park staff began work to negotiate the park's first post-EIS benefits-sharing agreement and engaged in a joint effort with WASO staff to implement a benefits-sharing program service-wide. Team members included staff from the DOI Solicitor's Office and advisors from other NPS units. Prior to beginning negotiations, proper benefits-sharing tools, protocols, and policies must be carefully and thoughtfully developed, reflecting key elements described in the final EIS and ROD. Due to the highly technical and legally complex nature of the topic, the final guidance documents will take many months to prepare. The Yellowstone negotiations team is preparing to engage the first of three Yellowstone agreement partners in early 2011.

Science Communication

Through a variety of print and electronic communications, staff contribute to the scientific body of knowledge about the park, discussion of park issues and policies by a variety of participants, and promote resource conservation and visitor enjoyment through improved understanding of ecological issues. The Greater Yellowstone Science Learning Center (GYSLC), which receives support from Canon U.S.A., Inc., through the Yellowstone Park Foundation as well as the Yellowstone Association, has been recognized as a service-wide model for a website strategy for NPS Research Learning Centers and Inventory and Monitoring Networks.

Now in its 18th year of publication, the circulation of *Yellowstone Science* has reached nearly 4,000, with a steady increase in the number of online subscribers. Among the year's highlights were articles about Yellowstone's pre-contact archeology and about tracking the dynamic changes at Mammoth Hot Spring Terraces.

In 2010, staff completed planning for the 10th Biennial Scientific Conference on the Greater Yellowstone Ecosystem, "Questioning Greater Yellowstone's Future: Climate, Land Use, and Invasive Species." The conference was held October 11–13, 2010, at the Mammoth Hot Springs Hotel for approximately 200 attendees, with nearly 60 presenters. The planning committee, comprised of science communication and other YCR staff, oversaw all aspects of the coordination, organization, and logistics for the conference. Staff supported the selection of papers and posters; served as the point-of-contact for all inquiries; edited, designed, and produced the layout for the conference materials; worked with the venue staff; and maintained a web page on the GYSLC as a portal to the conference.

Resource and Visitor Protection

Budget

	FY08	FY09	FY10
ONPS	\$7,596,400	\$8,100,500	\$8,647,600
ARRA		\$105,092	
Special Use	323500	361,841	358,016
Resource Damage Recovery	0	102,014	1,463
Proceeds from Sales	690	3602	1,796
Reimbursable Accts	839,349	338,723	506,031
Fee Collection	1,466,400	1,396,088	1,408,387
FLREA	866,430	894,930	616,810
Donations	485,756	231,170	277,444
Restitution	47,494	7,762	37,594
Federal Hwy	62,800	66,973	76,229
FILM			31,046
FIREPRO	1,271,789	2,090,366	1,007,034
TOTAL	\$12,960,608	\$13,699,061	\$12,969,450

Visitor Services Office

RVP fee collection operations include five entrance stations with 11 kiosks, an honor system at Bechler Ranger Station and seven campgrounds totaling 454 sites (open seasonally May to October, except Mammoth which is open all year). Yellowstone conducts a collection business under the authority of Title VIII of the Federal Lands Recreation Enhancement Act of H.R. 4818 (the Omnibus Appropriations bill for FY05).

2010 marks the fourth year of the *America the Beautiful - The National Parks and Federal Recreational Lands Pass Program*. The pass series includes an \$80 annual pass, \$10 Senior Pass

and non-fee Access Pass; the Yellowstone and Grand Teton Park Pass was \$50. Entrance fees were \$25 per vehicle/seven days. Campground fees continued at the same price, \$12 or \$14 a night depending on amenities at the campground.

Approximately 80 percent of fees collected remain in the park to accomplish projects the park has been unable to fund through yearly congressional allocations. Projects include road improvements, enhanced accessibility to park buildings and resources as well as campground and amphitheater upgrades. Most visitors are supportive of fees as long as the majority of fees are retained in the park to help protect the park and its facilities.

In 2010 the National Park Service offered free entrance during National Park Week April 17-25, June 5 & 6, August 14 & 15, as well Public Lands Day in September (these free days reduced annual entrance revenue by an estimated \$250,000).

North	699,229	East	468,234	Total Recreation Visitation
West	1,477,833	Northeast	229,876	3,640,184
South	765,012			

Fees Collected in 2010

North	\$1,865,824		
West	3,643,365	Campgrounds	572,142
South	217,063	Fish Permits	835,000
East	1,945,472	Boat Permits	24,360
Northeast	668,937	Total Fees	
Bechler	8,135	Collected	\$9,977,884
PLD	201,800		
VSO	3,981		
Sub-total	\$8,546,442		

Communications Center

The Yellowstone Interagency dispatch center continued to facilitate interagency cooperation and communication. The center dispatcher's answered nine 911 lines, eight direct phone lines and the park switchboard. We dispatched on three radio channels with eleven separate repeaters. We monitored over 400 alarm accounts and 63 cameras. In 2010 we answered over 10,000 alarm events. In 2010 the center handled 22,194 calls for service. The vast majority of these calls were for law enforcement purposes. We issued 6,747 case numbers. The center also facilitated park wide operations including handling flight following for 115 research flights, 1,642 maintenance calls for service, 397 road reports were logged, and 170 people on administrative travel were tracked.

Our warrant system continued to be a successful program that was provided to other parks. We continued to provide assistance to FLETC in the tracking of missing /stolen badges within the region. We have continued our MOU with Grand Teton National Park, handling all of their NCIC entries. We assisted other National Park Sites with their entries. The center manager provided copies of Yellowstone Communication Center SOP manual and the protocol manual to three other NPS locations. The center manager assisted three parks looking at CAD systems with direction and information on the standards needed for an appropriate CAD system. The 911 addressing project continued with assistance from the Yellowstone GIS Labs. Included in this project was the creation of a Greater Yellowstone 911 fusion group with the surrounding agencies to address on-going technical issues with 911 implementation and to improve inter-operational ability between agencies. Yellowstone hosted the first meeting of this group during which key issues of redundancy were identified. The manager provided crisis communication training to dispatchers from 3 states in a series of classes to improve coordination between agencies during significant crisis situations.

Seasonal Dispatchers Steve Foster and Patrick Klein were hired as permanent dispatchers.

Corrals

Corral Operations started the year out repairing the 200+ riding saddles and pack equipment used by park staff in the field. NPS stock was wintered east of Checkerboard, MT. on the Holiday Ranch, managed by Lloyd Zumbrum. All stock tested negative for Equine Infectious Anemia (Coggins Test) in February. NPS stock came through the winter in excellent shape and started the season better than they have in a few years.

The winter was fairly quiet for bison until mixed groups started showing up at Stephens Creek on April 3 and groups were hazed back till mid-May when they decided to stay. Corral Ops and Trails Animal Packers assisted with hazing operations in West Yellowstone at this time, horses were also issued to West Rangers to assist with this project. Winter came early in 2010 and we started hazing bison on December 2, 2010, and by the end of December we were very busy hazing. We kept four horses to work bison; on December 9 we brought four more horses from winter pasture as the snow was getting real tough and hard for horses to travel. We brought eight more horses from winter pasture at the first of the year. The year 2011 looks to be a busy bison year.

The third week in May Corral Ops assisted YCR-Vegetation with their Gardiner Basin Restoration Project; we seeded barley on 23, seven acre parcels. At the end of September we seeded these parcels and two additional parcels of eight and 11 acres in winter wheat.

On July 12, 2010, ground was broken for the new barn at Stephens Creek. The work seems to be progressing well and we should move in to the completed building sometime in March 2011.

Packing consisted of numerous trips for YCR: Packing Archeologists from Wyoming following the Nez Pierce Trail in the Hayden Valley, Pelican Valley and Lamar. Vegetation Management Crew wagon trip to Elk Tongue for weed mitigation. Bear Management had two wagon trips to

Slough Creek hauling Bear Proof containers to campsites. Geology Sciences had a trip to the Bechler area.

Other significant events were Rangers Color Guard at the Gardiner Rodeo Parade and the July 4th Parade at West Yellowstone. On August 25 we had a four horse color guard present the Colors at the Old Faithful Visitor Education Center dedication which came off very well.

Training consisted of two-one week Basic Horsemanship Classes at Stephens Creek. This was conducted by horse trainers Alvin Pierce from Paradise Valley and Larry Todd from Wilcox, Arizona. Their hands-on basic horsemanship skills were well received. Montana Equine Associates Veterinarian Dr. Al Flint did two Backcountry First Aid courses that were also well received. Staff had the opportunity to check heart rates, respiration and gut sounds, apply splints to injured legs and administer I.V. and muscular injections. These proved beneficial later in the season with injured and sick animals as staff was able to remedy emergency situations in the field with excellent results.

Backcountry Management

2010 saw the highest number of overnight backcountry trips since 2003. The number of backcountry permits issued increased 8.0% from 2009. It was the fourth straight year of increase and a 29.4% increase in permits issued since 2006.

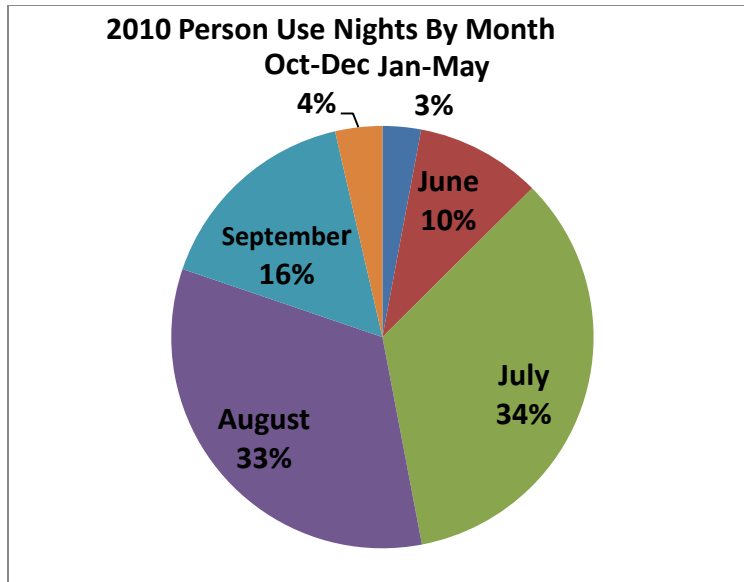
In the advance reservation system, 1,981 backcountry permit reservations were made. This was a 16.0% increase from 2009 and the highest number of reservations we have ever processed. Although we accept and process reservation requests from April through October, almost half of the advanced reservations are made in April. Dagan, Ivan, and Rachel Cudmore processed 970 public reservations during April 2010.

The revenue generated from the backcountry reservation fees (\$47,245) was used for Central Backcountry Office staff salaries and to fund operational costs of maintaining a reservation system. Two new computers and ten printers were purchased for backcountry permit offices in 2010.

Since 2002 Yellowstone National Park has hosted a Leave No Trace Master Educator Class. This year, Dagan co-taught the weeklong class which was held in June 2010 and attended by eight students.

Backcountry Use Statistics

	2008	2009	2010
# Backcountry Permits Issued	5090	5638	6090
# People Use Nights	39302	39714	44962
# Stock Use Nights	6173	5503	7001
# Advanced Reservations	1669	1708	1981



Commercial Use Management

In 2010, 46 saddle and pack stock outfitters were authorized to operate in Yellowstone under Concessions Permits. Three of these were llama packers. Five transfers were completed in 2010; and several additional permittees are in the process of transfers that should be completed in 2011. Approximately 100 outfitters, managers, and guides attended the annual business meeting held at Lake Lodge in June.

The guide certification portion of the meeting was eliminated in 2010. Dagan and Ivan created a computer based guide training program which can be self-administered by owners and guides. CD-ROMs were mailed to outfitters in June and were well received. 118 guides completed the training and assessment to become certified in 2010.

In 2010 there were 26 businesses operating under Commercial Use Authorizations (CUA) with permits to conduct overnight backcountry trips (backpacking and boating).

	2008	2009	2010
# Commercial stock overnight trips taken	132	118	134
# Commercial stock day trips taken	515	536	516
# CUA overnight trips taken	179	152	171

Wilderness Management

In May, the Arthur Carhart National Wilderness Training Center conducted an Interagency Regional Wilderness Stewardship Workshop in West Yellowstone. Ivan served on the steering committee and helped plan the training as well as facilitated several sessions. Dagan Klein and ten others from Yellowstone attended the weeklong intensive training.

The draft Backcountry Management Plan remains in draft form, no additions, changes, or actions were applied. No changes have been made to Yellowstone's Wilderness Recommendation – 2,032,721 acres of Yellowstone's backcountry is Recommended Wilderness.

Most non-emergent administrative actions that occur within Yellowstone's Recommended Wilderness must undergo a Minimum Requirement Analysis to determine if the activity should be conducted within Recommended Wilderness and if so, then determine the minimum tool to implement the activity. Backcountry projects are analyzed through a Minimum Requirement Analysis and then reviewed by a 5-person board. The board comprises Chris Glenn (RVP), Christie Hendrix (YCR), Ivan Kowski (RVP), Dan Reinhart (YCR), and Nancy Ward (Maintenance). Their recommendation is then forwarded to the Chief Ranger for final approval. In 2010, 11 Minimum Requirement Analysis' were approved:

- Helicopter transport of personnel to Fox Creek for cabin rehabilitation assessment
- Helicopter transport of construction equipment and supplies to/from Blacktail Bridge
- Transport appliances to Peale Island Cabin by motorized boat
- Helicopter transport of temporary radio repeater equipment to Druid Peak
- Helicopter transport of equipment and crew to Fox Creek for cabin renovation
- Helicopter transport of equipment and personnel to upgrade seismic network
- Helicopter transport of roofing material for Cabin Creek Cabin renovation
- Helicopter transport and installation of metal food storage boxes at four backcountry campsites
- Temporary installation of remote camera for willow research project
- Temporary installation of remote camera for wolf research project
- Helicopter transport and installation of permanent radio repeater on Druid Peak

EMS & Search and Rescue

Resource and Visitor Protection managed 22 official Search & Rescue (SAR) incidents in 2010. Dozens of other incidents, known as 'hasty' searches, or missing and/or separated parties were also managed by park staff. Most of these initial reports were easily and quickly resolved. Of the 22 official SAR operations, 13 incidents became "major" (un-programmed cost in excess of \$500) and three were mutual aid assists to other agencies. Four incidents resulted in five fatalities.

The Silver Cord rescue, in the Grand Canyon of the Yellowstone, proved extremely technical and challenging for Yellowstone and Grand Teton staff in late May. Two ice climbers fell to their deaths as a large chunk of ice they were climbing on broke loose (waterfall). Ranger staff did an exceptional job at mitigating extreme risks and evaluating the situation throughout the two- day operation.

Two searches were conducted over multiple operational periods. One lasted about six weeks, resulting in successfully locating the missing individual. The second missing individual, while searching covered several weeks, was not located before the snow began accumulating in late October, making the operation too dangerous to continue until the early summer of 2011.

Yellowstone staff continues to provide SAR expertise regionally via search dog capability, avalanche rescue expertise, technical rescue capability, helicopter rescue capability, and All Hazard incident and search management skill. In 2010, a short-haul program was put into operation, providing even more varied rescue capability.

Personnel in Yellowstone attended and/or instructed over 3,300 hours of training related to search and rescue in 2010. Yellowstone continued to provide both instructors and students for the NPS Basic Technical Rescue course held in Moab, UT every spring. A late season swift water rescue course was held in the Yellowstone River, providing a large group of responders with much needed training. Two Operational Leadership Training courses were held in October, with an emphasis on mission planning, situational awareness, and risk assessment.

Total 2010 SAR related expenditures were in excess of \$121,022.00. Park staff contributed over 2,800 person hours to SAR incidents. A large part of the dollar expenditure can be contributed to 12 rescues where helicopters were utilized to evacuate victims or search for lost persons. The SAR Program, and a small operation budget for training & supplies is coordinated for the park by Park Ranger Rich Baerwald. Financing, tracking, and reporting are coordinated between the Incident Commander, the Fire Cache Budget Assistant, and the Chief Ranger's office.

YNP TRANSPORTS				
	2008	2009	2010	average
CANYON	44	54	61	53
GRANT	29	38	43	36
LAKE	103	110	123	112
LAMAR/NE	8	12	16	12
MADISON	9	8	6	8
MAMMMOTH	68	56	86	70
OLD FAITHFUL	127	175	114	139
TOWER	29	17	33	26
TOTAL	417	470	482	456

	Transports	Non- Transports
ALS	353	42
BLS	129	257
TOTAL	482	299

Boone Vandzura was hired as EMS Director in March. Amy Mazzarisi is the parkwide EMS Training Coordinator. Joe Bueter, Dr. Luanne Freer and Bonnie Schwartz are the other team members on our EMS committee which is shaping EMS in Yellowstone National Park.

2010 was the first year the EMS Director was hired as a full time position. In previous years, the position was split between EMS, YCC and SCA programs. This gave EMS the opportunity to

strengthen and build the program. We have focused on a higher standard for our EMS professionals: increase in the quality of training, increase in run sheet reviews, and increase in the number of training sessions and consistent equipment and supplies throughout the park.

We want to thank the DR's, DDR's, local EMS coordinators, and CRO for their support as we strive to make YNP EMS the flagship EMS program in the NPS System.

Trails

2010 was once again a full, dynamic and challenging year for the RVP Backcountry Trails Program culminating in many successful administrative, initiative and project endeavors. In July, park staff had the honor of welcoming Vice-President Biden to Madison Junction for a brief appearance and inspection of high-profile ARRA projects. Trail Ops staff contributed logistical collaboration and barricade management oversight, including construction and demobilization of 125 feet of rustic Post and Rail fence and podium retaining cribbing to facilitate crowd control and meeting space.

In 2009, the advent of the Nationwide Initiative – The American Recovery and Reinvestment Act (ARRA) created and supported several park projects including those within the purview of RVP's Backcountry Trails Operation. The first of three projects-“Rehabilitate the Historic Observation Peak Trail” was completed in 2009 by NPS and ARRA Direct Hire staffing. In 2010, the final two projects “Repair Deteriorating Trails and Footbridges”, and “Realign Segments of the Historic Shelf Lake Trail” were undertaken to correct trail deficiencies by NPS staff partnered with Cooperative Youth crews, and completed within the initiative sunset date of September 30.

As required, all youth cooperating partnerships underwent full ARRA guideline-directed Cooperative Agreement procedures and documentation processes. In 2009, national directive and implementation issues delayed use of Cooperative groups, therefore the bulk of project work was completed this year where intensive surface repair, drainage, erosion control, corridor clearing and impacted site restoration work was conducted over the 102.5 miles of trail segments on the Beaver Ponds, Claggette Butte, Snow Pass, Howard Eaton, Hellroaring Creek, Canoe Lake, Sportsman Lake, Electric Spur, Cache Lake, Harlequin Lake and Purple Mountain, Sky Rim, Observation Peak, Clear-Ribbon Loop, Pelican Valley, Mountain Creek, Thorofare, South Boundary, and North Shore of Shoshone Lake and Shelf Lake Trails.

In mid-summer, under the directive of the ARRA hiring authority, (3) additional crew members were added. The Direct Hire process was employed to enhance the existing cadre conducting the ARRA project work and ending the field season with the aforementioned completions.

The 2010 Backcountry Trail Operations service-day observance of National Public Lands Day (NPLD) was also tied into the ARRA Trails and Footbridges project in late September when participating volunteers and NPS staff celebrated the day by addressing erosion, drainage and restoration issues on the Snow Pass and Howard Eaton trails. The project was designed to consolidate and complete previous work undertaken on trail segments near the Upper Terrace Drive of the Mammoth Hot Springs area. The day was once again observed in the spirit of public service and support so well-defined in both the credo of NPLD and the ARRA enabling legislation.

The day's celebration was once again enhanced by the wonderful support of Park Volunteer Coordinators who provided participants with snacks, drinks, energy and enthusiasm to carry them through the day of hard labor. The group received a general orientation, safety review, and ergonomic stretch session within the trail theory/skills orientation upon arrival at the worksites. A great time was had by all during this beautiful fall day and group members were already making plans regarding next year's participation.

Innovation, collaboration and partnerships with various youth and volunteer service organizations continue to be successful key ingredients of the Backcountry Trails Operation. In 2010, as part of the ARRA Youth Initiative Yellowstone benefitted from the assistance of 42 crew weeks on joint trail projects with our Cooperating Groups including the Montana Conservation Corps (MCC), Yellowstone Youth Conservation Corps (YCC), Student Conservation Association (SCA), Continental Divide Trails Alliance (CTDA), and dedicated individual volunteers. The YPF continues to demonstrate great support of our youth partnerships with 10 of the crew weeks contained within the scope of the 2010 TFI projects.

Structural Fire

2010 was another exciting year for structural fire. There is now a Structural Fire Protection Specialist at Lake and Old Faithful. Katherine McCoy is at Old Faithful and Mark Gleason is at Lake. These two positions provide needed fire inspections, apparatus inspections, and district training.

Of the 227 responses, 72% were false alarms. Overall responses were up 12% from prior year. False alarm percentage did not change from prior year.

The two most active areas were Mammoth and Old Faithful. Mammoth had 38% of the responses with 86. Old Faithful had 30% of the responses with 69.

The academies offered this year included: Defensive Fire Fighter, Fire Fighter 1, Fire Fighter 2, Driver/Operator, Fire Instructor 1, Fire Inspector 1, Fire Officer 1 and Wildland Fire Refresher. There were a total of 749 hours of instruction offered.

The department provided structural protection on two wildland fires. The first was the Arthur II followed by the Antelope fire.

In 2010 the department took delivery of another tracked fire apparatus. This allows both Lake and Old Faithful to have tracked apparatus.

Wildland Fire

Yellowstone's branch of wildland fire endured a slow fire season both locally and nationwide. There were 11 wildland fires; seven lightning caused, two human caused and the cause of one fire was undetermined. The year's total, both in terms of number of starts and acres burned were

approximately half of a “normal” or average season. A little more than 6,600 acres of Yellowstone burned this year, with the bulk of the acreage (5,500) coming from the Antelope Fire.

The season began in earnest in July when the Beach fire was discovered immediately west of the Arnica fire from 2009. Due to the early season and the potential for this fire to be very large and burn for a very long time, this fire was suppressed. A type 2 incident management team was brought in along with six 20 person crews plus helitack and overhead. At one point, this incident had more than 250 personnel, with more than half spiked out, which required tremendous support. Each crew that was spiked out was assigned a resource advisor from Yellowstone which naturally led to competition between the crews.

The largest fire of the year in Yellowstone was the lightning caused Antelope Fire. It started September 14, near Antelope Creek, and was quickly reported by the Mt. Washburn Lookout, Ed Stark. The fire was close to the lookout and the road, and Ed directed one of the lookout’s webcams at the fire so local residents, guest’s to Yellowstone and web viewers across the country were able to watch this fire fulfill its role in the ecosystem.

Wildland Fire Dispatch

The Wildland Fire and Aviation Dispatch office was staffed by one permanent and two seasonal employees. With the additional staff member, dispatch was able to provide more logistics and ground support to park incidents. We were also able to provide both seasonal dispatchers with live-fire field experience.

This season was quiet for both in and out of park incidents. Our interagency engine crew was dispatched to one out of park incident. In addition, 2 crew members were able to fill single resource requests. The park contract helicopter was dispatched to 5 incidents outside of Yellowstone while crew members filled two single resource requests. There were a total of 11 orders to support outside incidents.

Numerous park resources were dispatched through our office in support of the Gulf Oil Spill, which was a new function for us this year, as support for incidents such as this are normally handled by the park Communications Center.

There were just over 700 hours of flight following by the Dispatch office this year (not including flight time for lifeflights). In addition, 84 life-flights and 5 SAR’s occurred in the park.

Interpretation, Education and Partnerships

Budget Summary

For FY10, the Division’s base (ONPS) allocation was \$3,395,100. Other fund sources supported a variety of programs and projects. Some funding was tied to multi-year projects such as the planning and design of exhibits for the new Old Faithful Visitor Education Center (OFVEC). Complete itemization of fund sources and programming is reported in other documents.

Staffing

Permanent FTE totaled 20.42, temporary FTE totaled 41.66, for a grand total of 62.08 FTE. The total number of permanent positions was 22, the number of temporary positions totaled 139, and the grand total of positions was 161. This increase over FY2009 was due to the Division absorbing Youth Conservation Corps (YCC) program operations.

In FY10, Judy Knuth Folts, Deputy Chief, Operations & Education branches served as Acting Program Manager (WASO Chief of Interpretation & Education) May through August, on a 120-day assignment. Mary Wilson, VIP/SCA/YCC Program Manager worked through July 2010 before departing for a new assignment as Chief, Interpretation & Education, Canyonlands and Arches NPs. In June, Bob Fuhrmann returned to the Division following a one year detail to the park's Comprehensive Planning Office. Peter Hamel, Grant Sub-district Interpreter moved to a new job at Blue Ridge Parkway in July. Sabrina Diaz reported as the new Grant Sub-district Interpreter in August. Sally Plumb, Interpretive Planner and Project Manager, accepted a position with the NPS's Biological Resource Management Division in Ft. Collins, CO, at the end of the fiscal year.

Major Event

The Old Faithful Visitor Education Center (OFVEC) opened to the public on August 25, 2010. It achieved the first Gold level LEED designation for a Yellowstone National Park facility. Some 10,000 visitors poured through the building on opening day, an all time record for a single day in a Yellowstone NP visitor center. For the first time ever, opening day ceremonies were broadcast live over the park's official web site via the Old Faithful Live Streaming Web Cam. Public response has been overwhelmingly positive, with more than 600,000 visitors counted from opening day to November 7, the last day of operations during the "main" season of 2010.

The Yellowstone Park Foundation, Yellowstone National Park's official non-profit fundraising partner, raised \$15 million of the approximately \$27 million needed for the design and construction of the new OFVEC. The \$12 million balance of the funding was approved in the 2006 NPS Line Item Construction Program. Major corporate and foundation donors include: ConocoPhillips, Inc., Unilever, Coca-Cola Foundation, Toyota U.S.A., National Science Foundation, and the Kresge Foundation.

The Old Faithful Visitor Education Center (OFVEC) replaced the former undersized and obsolete visitor center complex. Public spaces and services include a lobby with visitor information and orientation functions, and a geyser eruption prediction display for the area's major predictable geysers; exhibits that feature a variety of multimedia interactive elements and a diorama portraying life in extreme habitats; the introduction of a "virtual visitor center" and "3-D" bookmarks that encourage visitors to stay connected to Yellowstone via this dynamic online resource; a "Young Scientist" exhibit hall and classroom with an erupting geyser model and activities designed to appeal to kids of all ages; a theater with custom designed ceiling and wall acoustic panels; a Yellowstone Association bookstore, with fixtures and finishes designed by the same firm who designed the Canyon VEC bookstore space; and a resource library room in which additional in-depth information about the topics of the exhibits can be found.

CTA Architects Engineers of Billings, Montana, was the project architect. Because the OFVEC is located within the Old Faithful Historic District and adjacent to the National Historic Landmark Old Faithful Inn, park staff and architects worked closely with the Wyoming State Historic Preservation Office (SHPO) in the development of the building's design.

Christopher Chadbourne & Associates, Inc., of Boston, Massachusetts, was the exhibit planning and design firm. University and government scientists, and educators affiliated with visitor studies and organizations such as the Monterey Bay Aquarium, served as advisors to park staff and the exhibit designers on the content and presentation of the exhibits. Pacific Studio of Seattle, Washington built and installed the exhibits. They also constructed the exhibits enjoyed by visitors at Canyon Visitor Education Center (which opened to the public on August 25th, 2006).

General

For the second year in a row, and for the third time in the last four years, Yellowstone National Park set a new annual visitation record of 3,640,184 people for calendar year 2010. Recreation visits in 2010 were 10.5 percent higher than recorded in 2009, which itself was a record year. The park also set monthly visitation records in June, July, August, September, and October.

All park entrances recorded annual visitation increases compared to 2009 levels. Double-digit percentage increases were recorded through the North and West entrances. The West Entrance continued to be the park's busiest and hosted nearly 1.5 million recreational visitors in 2010. Nearly all visitor centers set records for attendance, and high visitor demand drew down supplies of park publications such as the Official Map and Guide, the park newspaper, and many other printed materials.

The record breaking year combined with a major road construction project led to nearly unprecedented congestion at most front country locations at times. Parking lots and overlooks overflowed with vehicles, wildlife jams produced miles of backed up traffic, and park staff in all divisions was stretched to the limit to provide visitor services. Autumn brought an extended period of exceptionally mild weather, and visitation held strong until the park's main season ended on the evening of November 7.

The road construction project in the Gibbon Falls/Gibbon Canyon area between Madison and Norris Junctions was the focus of much outreach effort with local and regional communities and the general public. This project, which included rerouting a segment of road and completion of a new bridge over the Gibbon River, caused 30 minute delays and evening closures during the travel season through September 30. The Division of Interpretation provided significant outreach and public contact services, including staffing barricades at both ends of the construction zone, posting information and updates prominently on the official web site (including an interview with the Chief of Maintenance about the project), featuring the project and its travel impacts prominently in the official park newspaper, developing a handout for use during the closure period, and creating signs and other temporary informal displays parkwide to help travelers plan for delays and closures.

Division staff provided several tours and talks for special visitors in FY10 including Vice President Joe Biden and family in July; Shalin Liu, a major donor to the Old Faithful Visitor Education Center, in August; and Dr. Aramaki, a Japanese geologist, who is a member of a team of scientists, educators, and planners working toward establishing a new visitor facility at Mt. Fuji, Japan. Interpretive Planner Sally Plumb represented Yellowstone and the National Park Service at an international conference held at Mt. Fuji in February. Sally provided an overview of the process of planning and designing the new Old Faithful Visitor Education Center as a case study of the challenges presented by such a project in a highly sensitive natural resource area that also includes significant cultural resources and is the single most visited location in Yellowstone National Park.

Overall, FY10 was one of the busiest years ever in terms of record breaking visitation combining with major projects and events. The dedication, hard work, and professionalism of Division staff were displayed every day of this extraordinary, history making year.

Park and Division Partners

The Museum of the Rockies continued to contribute staff and volunteers from the Southwest Montana Astronomical Society to provide four days and evenings of solar and night sky observations and evening programs in the Old Faithful and Madison areas throughout the summer. Staff assisted the Yellowstone Park Foundation with field trips during FY10 board meetings and provided several special tours for potential donors. Major projects funded by YPF corporate donors included Education Programs such as Yellowstone to You (Outreach), Yellowstone Field Trips (Day Use), Scholarships to Expedition: Yellowstone!, Junior Ranger and Young Scientist Programs, and a restructured and refocused Native American outreach program focused on young people and families. Canon USA's *Eyes on Yellowstone* grant to YPF continued to support the operation of the Old Faithful Live Streaming Web Cam, ongoing development of live ranger programs, and production of web-based educational media such as a variety of web videos and podcasts.

Division staff worked closely with staff from the Yellowstone Park Foundation to plan the special grand opening events for the new Old Faithful Visitor Education Center on August 24 and 25, 2010. Staff also provided extensive support for the multi day events associated with the October YPF Board meeting, which was a weekend long celebration of YPF's successful conclusion of fundraising for this signature project, the largest single fundraising undertaking of this nonprofit park partner to date.

The park's cooperating association, The Yellowstone Association (YA), reached the conclusion of its one time fundraising campaign for infrastructure. Launched in 2005 with a targeted amount of \$11.2 million, \$8.3 million was raised. With these funds, YA improved bookstore spaces in Canyon and Old Faithful VECs; purchased land in Gardiner, Montana and constructed a warehouse from which to support bookstore operations at NPS facilities in the park; purchased and renovated a historic Gardiner structure to serve as its headquarters; and purchased a property north of Gardiner near Yellowstone's border which will be marketed to small groups seeking overnight accommodations with an education component. Long time YA Executive Director Pat Cole announced her retirement, effective March 18, 2011.

Operations Branch

Visitor facilities operated in FY2010 included Albright Visitor Center (year round), the temporary Old Faithful Visitor Center, the new Old Faithful Visitor Education Center (opened August 25, 2010), Canyon Visitor Education Center, Fishing Bridge Visitor Center, Grant Visitor Center, Madison Information Station/Junior Ranger Station, Norris Geyser Basin Museum, Museum of the National Park Ranger (Norris Campground), West Thumb Contact Station, and the West Yellowstone Visitor Information Center. The Mt. Washburn Lookout includes a self-serve observation room and deck that feature exhibits around the room's perimeter identifying the mountains and other landforms visible from this high elevation perch, and interpreting the Yellowstone hot spot volcano as well as wildland fire ecology. During the winter season, Albright and Old Faithful Visitor Centers and West Yellowstone VIC were operated, and warming huts at Madison Junction, Canyon, Fishing Bridge, and West Thumb provided basic winter visitor services.

Park interpretive rangers staffed 13 different visitor centers, museums, and warming huts at which they and interpretive media (exhibits, multimedia interactive devices, films) provided information and orientation to 2,424,394 visitors, up 18% from FY09. They presented 7,608 formal interpretive programs to 290,304 (up 14% over FY09) visitors participating in walks, talks, hikes, and evening programs. Interpretive rangers provided informal interpretation (also known as "roving" interpretation) at critical resource locations throughout the park including geyser basins, along the rims of the Grand Canyon of the Yellowstone River, major overlooks and scenic attractions, wildlife jams, picnic areas, and campgrounds. Informal interpretive activities resulted in 295,215 visitor contacts.

The Ranger Adventure Hikes program, a free service providing a more extended hike to major backcountry features, served 2,157 visitors in FY10. Visitors participating in this program consistently offer overwhelmingly positive comments about the high quality of the hikes and the opportunity to spend in-depth time with a ranger.

This year, a total of 27,101 children and their families were served through the Junior Ranger Program and Young Scientist Program, the latter being available at Canyon and Old Faithful. These programs were coordinated through the Education Branch, with publication production services provided by the Planning and Media Branch, and program delivery provided by the Field Operations Branch. A total of 9,904 Junior Rangers and their families participated in programs at the Junior Ranger Station, located in the former Madison Museum building.

The Elk Corps Volunteer Program was again successful in reducing autumn rut-related incidents involving elk-human encounters in the Mammoth area. This sixth year of the Elk Corps operated with volunteers from early September through mid-October in the Mammoth Hot Springs Sub-district. Volunteers assisted in controlling crowds, creating a safe wildlife viewing environment for visitors while protecting wildlife, and providing critical resource information to park visitors. Four volunteers were hired for months of October, 2009 & September 2010. Volunteers provided resource warnings for being too close to elk to 3,250 visitors and general information on elk biology and safety to 6,199 visitors.

The Wolf Ambassador and Bear Education Programs continued to be offered. Interpretive park rangers provided educational information at the locations where wildlife and visitors interacted, informed visitors about wildlife habituation, enhanced visitor and wildlife safety, and reduced visitor/animal conflicts. Interpretive Rangers made 33,595 educational contacts at wildlife jams, pullouts, campgrounds and while giving evening campfire programs.

The Gateway Community Outreach Program continued to be a valuable communication tool for park management. District interpretive staff attended 32 community meetings in the tri-state area, making 1,274 professional contacts through attendance at Chamber of Commerce meetings, civic organization meetings, and special event shows in the region. The goal of this program is to continue to develop and maintain positive, mutually respectful, and beneficial relations with park gateway communities located in Montana, Idaho, and Wyoming. In addition to the normal exchange of information at these meetings, the Community Outreach Program became a critical component of the park's communication plan for ensuring that information about the Gibbon Canyon road construction delays and closures was widely disseminated throughout the main season of visitation.

Branch of Interpretive Planning and Media Services

Planning/Project Management

Completing the new Old Faithful Visitor Education Center was the primary focus of this position. Extensive rewriting of exhibit text was necessary, and every exhibit photograph, graphic, text block, label, and layout had to be reviewed multiple times to ensure that exhibit plans were accurately translated into the several hundred exhibit panels, displays, interactive devices, and models. Extensive integration with building construction and finishing was also critical to the success of the project and required daily communication with project managers from the NPS, CTA, and the general contractor Swank Enterprises. Problems were encountered with mislabeled paint specifications and a portion of the exhibit hall was repainted. Multimedia interactive units had software problems and had to be redesigned to work within the limitations of the telecommunications infrastructure at Old Faithful. The geyser eruption model in the Young Scientist exhibit space was engineered for sea level operations and required nearly a total redesign to achieve full function at an elevation of some 7,400 feet. As exhibits were installed, several on site changes had to be made to fit elements into assigned spaces or to make mechanisms work that could only be tested on site to determine their viability. The resource library space needed custom designed furnishings to make the most of this relatively small area while using the same high quality materials and finishes found throughout the public spaces in the building. Two laptop computers containing in-depth educational content about geology, volcanism, hydrothermal features, and thermophilic lifeforms were developed for the library, along with twelve educational site bulletins spanning the range of topics presented in the exhibits.

Staff worked closely with the park's Public Affairs Office to provide information to electronic and print media about the building, exhibits, and opening events. Several special preview tours were provided to media representatives, YPF donors and staff, and various "special" people associated in some way with the project.

Planning for the by-invitation-only preview event on August 24 and the public opening ceremony on August 25th consumed nearly the entire year. Invitation lists for three different events (including a luncheon following the public ceremony on August 25th) were created and continuously revised and updated. Invitations were designed, printed, and mailed to some 600 guests. Gifts for the various levels of participants and donors and souvenir items were designed and produced. Planning the events for the evening of the 24th and day of the 25th changed frequently as RSVPs arrived, affecting protocol and all facets of the events themselves. Stage design changed many times in order to ensure adequate size for an ever changing group of special guests and DOI/NPS dignitaries. An Incident Command team was formed to support both events. Weather was spectacular, with clear skies and warm temperatures bringing large crowds of visitors out for the public ceremony on the 25th. For the first time ever, the ceremony was broadcast live over the park's official web site, and a recorded tour of the new facility highlighting the 4,500 square feet of new exhibits was developed for the Old Faithful Virtual Visitor Center. Cookies and punch were served to visitors, and the building was packed with enthusiastic celebrants who were delighted to be part of the historic day. Twenty-five special activities, talks, tours, and programs were offered as part of the opening day celebration.

Exhibit Program

The Exhibit Program is responsible for indoor and outdoor exhibits parkwide. This includes all facets of development from inception through content development, design, installation, maintenance and upkeep, and eventual replacement. Staff also serves as consultants to parks and a wide range of organizations seeking exhibit development advice.

Located along roadsides, self-guiding trails, trailheads, and in developed areas, wayside exhibits provide critical resource protection and visitor safety information throughout the park, and provide site specific education at hundreds of Yellowstone's natural and cultural resources. More than 350 wayside exhibits are currently in use, and many more are in various stages of planning and development.

Multiple wayside exhibit projects moved through various stages of content research, design, fabrication, and installation. A series of 35 new wayside exhibits for the Old Faithful developed area was developed in conjunction with exhibit planning for the indoor exhibits at the new OFVEC, and four orientation panels were installed in the immediate vicinity of the new building. Reaching completion were the design and installation of two new wayside exhibits interpreting the 1877 Nez Perce War as it related to Yellowstone; the installation of five wayside exhibits interpreting natural history associated with and following the Fires of 1988; the installation of a trail leaflet box at Brink of Upper Falls. Five wayside exhibit frames were sanded and spray-painted to cover graffiti, and a digitally embedded panel was replaced. Two exhibits were removed from the Haynes Photo Shop at Old Faithful prior to moving the historic structure; and a wayside exhibit interpreting the Roosevelt Arch was removed in preparation for frame replacement. The fabrication of seven portable signs was completed. These signs are now ready for use by the trail crew in recognition of trail and campground rehabilitation project donors. An additional 11 projects, comprised of 27 waysides, are in various stages of content research and design; many more are in the early research stages.

To meet Facility Management Software System (FMSS) mandates for data entry associated with exhibits, a part-time employee was hired. After becoming familiar with requirements and learning the FMSS program, this enormous task in the park's extensive exhibit program began. The process includes inventorying waysides and visitor center exhibits parkwide, conducting condition assessments, photographing and gathering GPS coordinates and other pertinent information, and entering the data into the service-wide database. During FY10, 308 wayside exhibits were inventoried, assessed, and entered into the database, as were 559 visitor center exhibits in 5 of the park's 10 visitor centers, museums, and contact stations. This task will continue into FY11.

Indoor exhibits serve visitors in all 14 of the park's visitor centers, museums, contact stations, and the Mt. Washburn Lookout. Conditions vary from brand new (at the new OFVEC) to several decades old. At the Norris Geyser Basin Museum, exhibits in the west wing had deteriorated badly. The research and design of 17 exhibit panels were completed and they were installed. These new and updated exhibit panels will present interpretive information and graphics until a more complete renovation of all exhibits in both wings of the facility can take place.

Plans for new Albright Visitor Center exhibits are underway in coordination with the upcoming renovation and earthquake mitigation of the Albright Visitor Center building. Major themes were identified as history and wildlife; these themes will be interpreted in approximately 2,000 square feet on two floors in this historic structure. A volunteer, hired during the previous fiscal year to conduct content research for the history section, continued his research into mid-October, completing an eight-week assignment. Exhibit development reached the Concept Phase by the end of the year. American Reinvestment and Recovery Act (ARRA) funding for the renovation was not approved, so the project remains in the FY 2013 Line Item Construction (LIC) program. Yellowstone Association special project grants are being accumulated over several years to support exhibit development and installation, as there is no funding for these education components in the LIC program.

The Canyon Visitor Education Center is now five years old and entered its fourth full season of operation in FY10. Exhibits and interpretive media continued to draw enthusiastic responses while enhancing visitors' understanding of Yellowstone. With a few exceptions, exhibit maintenance has transitioned from crisis management into routine maintenance, although new skills continue to be acquired as mechanisms begin to age. In FY10, a professional topographic model artist was hired as a volunteer for the third year in a row to clean, touch-up, and maintain the Yellowstone interactive map model, lengthening the life of this popular exhibit. The Kugel globe's backwash filter needed extensive repair but was up and running during the entire open season. The earthquake/seismograph exhibit required reprogramming early in the summer, but software problems caused it to be inoperable during the remainder of the season.

As noted in other reports, precise counts of visitor use of exhibits are impossible to obtain for many reasons. However, reasonable estimates can be made from a variety of data. Informal observations reveal a high level of use and appreciation for both indoor and outdoor exhibits. For example, during a 1-hour informal observation, 103 visitor groups stopped at one Mammoth Hot Springs interpretive trailside exhibit. Many of these groups continued up the trail, and stopped to look at additional trailside exhibits along the way. Considering the year's record visitation, and

deducing that most visitors use at least two indoor and two outdoor exhibits during their visit, it can be conservatively estimated that exhibits were used at least 14 1/2 million times during the past fiscal year. Observation of actual behavior suggests that the number is much higher, making exhibits one of the most cost-effective methods of serving Yellowstone's visitors. Additionally, visitors rate exhibits at the top of those services they prefer and expect during a park visit.

Publications Program

Publications serve a vast and diverse audience of park visitors and the general public. As with exhibits, it is difficult to accurately count the many occasions when visitors used park-produced publications. It is estimated that during the course of a typical park visit in FY10, each visitor used approximately three different publications. Visitor use estimates based on last year's record breaking visitation indicate that over 10,900,000 visitor contacts with NPS publications occurred, and that is no doubt a very conservative figure. Along with other interpretive media, publications are the most cost-effective means of providing services that are highly valued by park visitors.

During FY10, the publications specialist worked on more than 70 different publications, including 2 new, 32 recurring, and several one-time publications, and 35 site bulletins. The two new publications were *Accessibility in Yellowstone*, a comprehensive guide to YNP's accessible services and facilities, and a self-guiding tour booklet for the Old Faithful Historic District. The recurring publications included four editions of the official park newspaper *Yellowstone Today*, *Yellowstone Resources & Issues 2010*, the *Trip Planner 2010*, and eight self-guiding trail booklets used at major park attractions such as the Grand Canyon of the Yellowstone and Old Faithful Geyser areas. Park geologists collaborated with a substantial review and revision of the geology information included in *Resources & Issues* and other publications.

The publications specialist contributed to the opening of the Old Faithful Visitor Education Center through a variety of publications. The OFVEC was featured prominently in *Resources & Issues 2010* and the newspaper production schedule was advanced so the autumn newspaper would arrive early for the grand opening. The publications specialist also produced a four-page full-color supplement for the park newspaper, a "save-the-date" postcard, 14 site bulletins (5 new and in color), and an August 25th program handout.

Significant support for safety and visitor comfort was provided through publications, such as road construction flyers and the safety hangtag handed out at entrance stations. The park's high visitation required flexibility with publications management. The publications specialist helped coordinate extra runs of the park newspaper through GPO and the vendor; helped Visitor Services fulfill fishing regulations requests after the printed supply was gone; and reprinted other visitor publications as needed.

Web/Internet Program

The Web Program develops, maintains, and evaluates Yellowstone National Park's official website and related assets, including electronic field trips on Windows into Wonderland and a social networking presence on Twitter. It works closely with all park divisions, offices, and partners to acquire and manage information from which high impact, high quality, and diverse interpretive and educational products are delivered to millions of users of all ages and backgrounds nationally and internationally. Through dynamic web-based features, staff creates a

“virtual park experience” designed to engage a global audience in understanding the significance of Yellowstone and become supporters of its preservation. The official website also continues to evolve in order to achieve broader goals relative to “e-government” and the transparency of government institutions.

Yellowstone National Park’s official website continues to be the most viewed park website in the NPS.gov system. Yellowstone’s web pages were viewed a total of 78,785,396 times in FY10. The park’s homepage alone was viewed more than 4.5 million times, up 39% from FY09. Other key entry points into NPS.gov are the Plan Your Visit Pages. Yellowstone again led the way with 1,572,520 page views of its Plan Your Visit index page.

Other key sections include the park’s webcam collection, which provides views of Old Faithful, Mt. Washburn, and Mammoth Hot Springs. These pages were viewed more than an estimated nine million times, and linked the public to a broad range of related in-depth interpretive and educational material in the process. The Live Streaming Webcam Launch Page had 1,627,403 page visits. Outside of the park’s webcam collection as a whole and the Yellowstone homepage, it was the single most viewed web page on the park’s site in FY10. After three years of nearly uninterrupted service, it remains the single most popular individual web feature within the entire NPS’ collection of web content.

Web stats software reported visits from people living in 230 countries worldwide. The top countries with the most web visits were Canada, the United Kingdom, Germany, France, Netherlands, Italy, Australia, Japan, Ireland, and Spain.

During FY2010, the Web Office doubled its efforts to reach a larger audience through the use of social media, specifically Twitter. The park’s Twitter site debuted on June 5, 2009. At a current following of almost 4,500, Yellowstone’s Twitter audience almost tripled over FY09 levels, reflecting current trends in the use of social media. Emergency notifications, road and weather conditions, fire activity, and general news are now sent automatically to a list of followers, many of whom include organizations with large followings (for example, Martha Stewart or the National Geographic Society). These items then get “re-tweeted” or forwarded to their followers, and so on. Communities form around specific areas of interest, such as fire management, wolves, and webcams. When inaccurate or misleading information begins to circulate on the web surrounding hot topics or issues, web staff can now tweet brief messages and links to officially released park service information on official channels in a timely manner. The Web Office continues to research and develop proposals for policies that will lead to the managed expansion of social media as a way to effectively engage, communicate, and influence the public to support the park service’s core mission and principles.

Web Office staff continue to serve as consultants, along with a handful of other NPS employee’s servicewide, in working with the WASO web team to solve problems with the use of the Content Management System and continuously improve current websites while identifying appropriate new technologies to support ever expanding interpretive and educational programs and goals for the future.

In FY10, web videos, podcasts, and live ranger programs continued to be developed. Web videos and podcasts have grown to provide a comprehensive introduction to almost every facet of Yellowstone, serving prospective visitors and lifelong learners alike. Goals for the next phases of development include expanding the orientation section and adding virtual hikes to several spectacular backcountry venues. Live interpretive and educational programs have been offered experimentally and have demonstrated exciting possibilities for engaging new and nontraditional audiences through the World Wide Web.

Photography/Videography/AV Technical Support Program

The park photographer/AV specialist responded to hundreds of requests for services from all park divisions and partners. Special events that required photo documentation in FY10 included the grand opening of the Old Faithful Visitor Education Center, Vice President Joe Biden's visit to the park, the U.S. Mint event for the Yellowstone National Park quarter, and the presentation of Yellowstone National Park patches by a space shuttle astronaut.

Although the slide scanning and digitization project is now largely complete, photographs are edited and catalogued on an ongoing basis to keep the digital image bank current. These efforts continue to be complicated by the process associated with the NPS Content Management System. However, the existing collection of digital images available to the public online is highly popular, and the web pages remain among the most visited on the park's website.

Images needed for park use in FY10 included new photography of artwork for the Nez Perce wayside exhibit, household products for OFVEC exhibits, the completed OFVEC exhibits themselves, periodic photos of the new Gibbon River Bridge construction, and parkwide natural history views and activities. This office provides essential support for all interpretive programs and interpretive media development including exhibits, publications, and the park website, and is frequently called upon to support other staff projects and to accompany non-NPS photographers and media. Photo research was required to locate images for park projects as well as to fill requests from individuals and organizations outside the park, such as for the Yellowstone quarter, the Yellowstone Park Foundation, school instructors, and media.

In FY10, the park photographer/AV specialist videotaped the 10th Biennial Scientific Conference on the Greater Yellowstone Ecosystem, Mud Volcano and Black Growler for an OFVEC exhibit, film monitoring training, research permit training, Division of Interpretation seasonal training, and OFVEC training concerning the audiovisual systems, exhibits, and lighting.

This office is responsible for coordinating the equipment management and troubleshooting of the audiovisual systems in nine visitor contact facilities and nine campground amphitheaters. Of particular note in FY10 were the problems in the new OFVEC auditorium caused by power brownouts and blackouts. In his AV Technician role, the one employee of this office worked with a subcontractor to the OFVEC general contractor to specify and install power conditioning equipment in the theater. Staff also continued to liaison with Harpers Ferry Center for Yellowstone's audiovisual equipment.

A significant amount of time was spent in FY10 on initial orientation and training on the OFVEC building and each of the exhibits. The geyser model took a considerable amount of time cleaning

and maintaining. A variety of upkeep and maintenance issues at the Canyon Visitor Education Center were also managed, including repairs on the Kugel Globe backwash filter. The lava lamp required maintenance and adjustments to the water, wax, and dye for optimal performance. Troubleshooting the theater caption board was required and a factory repaired board was reinstalled. In addition, an exhibit lighting inventory spread sheet for the 15 different lamps used in 32 exhibits was established.

Branch of Youth Programs

Formal Education

The Division continued internal evaluation of the Formal Education Program with primary goals to: 1) reach new and underserved audiences; 2) use funds—both public and private—most efficiently and effectively; 3) make Yellowstone’s resources relevant to visitors; and 4) cultivate a stewardship ethic among young people so they will gain not only an understanding of the importance of protecting the Park, but also of the broader sustainability practices that can make a difference in their own communities. Yellowstone began improving and adapting some of the programs funded by Toyota USA in 2010, but much work was stalled during summer 2010 when temporary changes in staffing became necessary to support the new YCC program.

The Yellowstone to You program – the education outreach program -- was successful in engaging new audiences at regional Science Fairs, Powwows, Expos, Native American reservations and schools, and other community events to provide hands-on activities for youth and their families. Staff attended and participated in 60 such events, and contacted 5,528 individuals.

A record number of children and their families participated in the Junior Ranger/Young Scientist program. 23,692 kids completed the program and were awarded a patch or key chain. Eight Junior Ranger Wildlife Olympic events were conducted parkwide for 2,085 kids and their families.

The park continued to offer *Yellowstone Field Trips (Day Use)* programs to primary, secondary, and college students visiting the park. 100 programs were offered for 2,664 visitors.

Education staff presented programs and provided educational materials on Yellowstone resources to 94 teachers participating in workshops in the park and region that were sponsored by external organizations.

Toyota USA continued to provide generous support for the *Yellowstone Field Trips (Day-Use) Program*, *Junior Ranger/Young Scientist Programs*, and the *Yellowstone to You Program*.

In 2010, 1,420 students, teachers, and chaperones representing 51 schools, participated in the residential education program, *Expedition: Yellowstone!* (EY). Of that number 40% of the students, representing underserved and/or disadvantaged target audiences, received full or partial scholarships (\$32,149) to attend the program. The Yellowstone Park Foundation supports this program through a special EY scholarship fund.

Park staff continues to research the broader concept of providing a distance learning program that could be used by educators and their students anywhere in the country throughout the year. Four presentations, via live video conferences, were provided to 204 students in Oregon and South Dakota as part of the pilot program in FY10. The distance learning concept will continue to be developed to address lifelong learners of all ages and with a mostly informal education focus and design.

Staff carried on consultation with teachers from some of the six schools targeted with high numbers of Native American students in Idaho, Montana, and Wyoming. Several off-site visits to these schools are planned for FY11.

Youth Conservation Corps

Yellowstone's Youth Conservation Corps (YCC) program is a residential camp running from mid June through mid August. Established in 1984, it has operated annually since 1989. The program emphasizes work ethics, introduces participants to the spectrum of NPS career opportunities, supported environmental awareness, and promotes recreational activities that encouraged participants to build lifelong healthy habits.

Yellowstone's Youth Conservation Corps (YCC) has continually been an extremely productive and influential Youth Program and the 2010 season was no exception. The outstanding leadership provided by the dedicated YCC staff steered the Environmental Education and Experiential Recreation Programs to new levels of excellence and led to the completion of many quality work projects throughout the Park. The commitment and character of the seasoned YCC staff made them strong mentors for the participants of the program.

During summer 2010 the YCC program was operated by the Division of Interpretation and Education for the first time in its 20+ year history. Several changes resulted in program improvements and results that better achieved park and national goals for youth programs. Two shorter sessions were provided for summer 2010 for youth ages 15-18, resulting in more young people participating in the program than was possible with just one long session.

Staff developed age-appropriate work projects for crews, reducing injuries, improving safety, and providing a better introduction to the workplace for these mostly inexperienced young people. The park increased the total number of hours of interpretation & education for enrollees to 25% and provided more in-depth education on Government/NPS careers than previously offered.

The Division hired a more diverse work group than ever before. While youth from across the country were selected to participate in the program, recruitment efforts concentrated on youth from American Indian Reservations and/or Schools in Wyoming, Montana, and Idaho. For summer 2010, one of the nine crew leaders was Native American; two of the six returning youth leaders were diversity hires – one Pacific Asian and one Latino; and of the twenty-six enrollees/students, two were African American and nine were Native American.

The Yellowstone YCC program directly supports Secretary Salazar's vision of a national youth program that would provide jobs, outdoor experiences, and career opportunities for young people; and Director's Order 26, Youth Programs, by providing a youth program that helps

young Americans understand the importance of protecting and preserving the cultural and natural resources in the national park system. In addition, by reaching out to young people from different social and economic backgrounds, the Service provides special opportunities for young Americans who might not otherwise have the chance to visit or work in a park.

Matching funds were successfully secured from the Park Partnership Program (PPP), thereby maximizing the use of the remaining YPF/Loyal Order of the Moose donation. The annual cost of the YCC program is approximately \$355,000.

Work Projects for 2010 –YCC staff completed several work projects throughout the park. Work included trail maintenance—installing 18 water bars, 33 check dams, clearing over 41 drains, and removing at least 30 trees that were across trails; work on backcountry campsites – dug 3 pit toilets; constructing over 960 feet of fencing and railings at a few of the geyser basins; assisting with ripping up, rehabbing, and installing 900 feet of the Biscuit Basin boardwalk (ARRA project); constructing and installing 32 food storage boxes at frontcountry campsites; removing 56 garbage bags of weeds and over 266 lake trout from Yellowstone Lake while working on invasive species control; and collecting 30-40 pounds of native seed and planting 3,250 seedlings along the Gibbon River corridor to promote native plants restoration in the park. Enrollees were also involved with a public contact function by learning how to manage and present a *Junior Ranger Wildlife Olympics* event for the public. Following a day of training that involved shadowing the education staff as they conducted a scheduled event, enrollees successfully ran another *Wildlife Olympics* session for visitors.

YCC Environmental Education Projects –YCC staff provided students with daily lessons from the updated Education/Awareness curriculum and never hesitated to take advantage of the many teachable moments provided by the park throughout the summer. The main educational topics investigated were: Wildlife and Vegetation, Geology, Sustainability/Greening, and Human History. Though the work weeks ran Monday through Friday the experience and exploration was not confined within those days. The weekends provided unique recreation opportunities including rafting the Yellowstone River, fishing, swimming, a backpacking trip to the Beartooth Mountains, summiting Avalanche, Bunsen, Washburn, and a number of other peaks, as well as countless other hikes around the park.

Career Opportunities – Staff and enrollees heard from very many knowledgeable guest speakers about careers with the NPS and specific project work and research taking place in the park. Speakers came from a variety of Divisions, including Colin Campbell from the Superintendent's Office; Kerry Gunther, Bridgette Guild, Jen Whipple, Roy Renkin, Rick Wallen, and John Klatopsky, Colby Anton, Rick McIntyre, Heidi Anderson, Robin Park, and Brian Perry from YCR; Bill Hopkins, Jim Evanoff, Joe Regula, Paul Anderson, Sam Reid, and Frank Houck from the Division of Maintenance; Johan Anderson and Matt Hines from the Fire program; and Debbie Van Winkle, Sean Miculka, Tom Roberts, Brian Perry, Jessica Dawson, and Jennifer Conrad from the Division of Interpretation and Education. They also received lessons in fly casting and tying from Matt Wilhelm of the *Fly Fishing Federation*.

Parkwide Volunteer Program

The Yellowstone VIP program was improved for volunteers by utilizing the www.volunteer.gov/gov website to proactively advertise volunteer job opportunities that are available in the park. This method of connecting park VIP opportunities with qualified

volunteers will continue to be expanded. The park made major advances by providing volunteer supervisors with online service and support via Yellowstone's intranet site, resulting in improving the completion of paperwork in a timely manner and maintaining better records for VIP hours and VIP reimbursements. A YELL work group was formed to provide interdivisional perspectives on the development of standardized volunteer reimbursement guidelines for the park and to improve communications for VIP supervisors. In addition, a standardized and consistently applied awards policy was created that recognizes volunteers based upon hours worked and established a tiered awards system. Awards were purchased and organized for efficient distribution.

While **642 volunteers (including SCAs)** contributed a collective total of **87,214 hours** parkwide in FY10, the following groups are highlighted to illustrate the variety of ways in which volunteers are involved in supporting the NPS mission in Yellowstone:

- Seventy-one volunteers with the park's Fisheries Management Program gave 3500 hours in efforts to reduce the number of non-native trout in Yellowstone Lake, conduct lake and stream fish surveys, and assist fisheries biologists with other aquatic research projects.
- A total of 173 volunteers provided more than 21,000 hours to YCR helping with hydrothermal monitoring, exotic vegetation removal, GIS resource mapping projects, and wildlife projects such as wolf and bear monitoring. Twenty-seven VIPs assisting the Cultural Resource Management Branch gave an additional 2,742 hours.
- The ARCH Yellowstone Volunteers (sponsored by YPF/ARCH Venture Partners) reconstructed the Tower and Lamar ranger corrals. The group was comprised of 22 volunteers including 9 men from the *Wounded Warrior Project*—a group dedicated to assisting injured service men and women. The project lasted five days and included harvesting timber and peeling logs for fence rails, rebuilding gates, creating a new interior pen for the corrals, and hauling four cords of firewood salvaged from the project.
- Five volunteers, scattered across the U.S. from California to Connecticut and in Great Britain, remotely operate the pan, tilt, and zoom functions of the Old faithful Live Streaming Web Cam. As a result, millions of web visitors can experience live eruptions of Old Faithful Geyser as well as other geysers seldom seen by "real" visitors to the park. No other single program has such high visibility or public impact, as documented through page visit statistical monitoring. This group donated over 2,900 hours in FY10.
- The Upper Geyser Basin Volunteer Corps contributed 560 hours and contacted 21,971 visitors providing information on hydrothermal features and wildlife safety to park visitors in the Old Faithful area. Two from this group also monitor resources and compile data that is used by the Park's geologist.
- The Elk Rut Volunteer Corps (4 VIPs—Oct 2009 and Sept 2010), donated 660 hours and provided elk education and safety messages to 6,200 visitors at Mammoth Hot Springs. Volunteers for the Division of Interpretation and Education also assisted Interpretive Park Rangers working the information desks at Visitor Centers.
- The Resource and Visitor Protection Branch utilized VIPs to issue backcountry permits, help visitors file paperwork from vehicular accidents, and complete backcountry trail and campsite work. 97 VIPs gave 15,390 hours during FY10. Fifty-seven campground hosts gave 17,169 hours assisting visitors at camp grounds located throughout the park.
- Sixty-seven volunteers for the Maintenance Division worked to remove weeds, clean-up grounds near buildings and amphitheaters, and complete other work throughout the park.

Safety

The Division had ten injuries in FY10, although two were OSHA reportable, none were DART injuries. This was the first year that the Division had responsibility for operations of the Youth Conservation Corps (YCC). Although there were four YCC injuries, this rate was significantly lower than in past years and is likely due to the project work being more age-appropriate for 15 – 18 year-olds. Field Supervisors were provided with information on slips, trips, and falls to employees to use at safety tailgate sessions. A total of 520 safety tailgate sessions and 6 safety observations (walkthroughs) for employees or facilities were conducted.

Other

Division staff served on various interdivisional work groups including; the Research Permit Team, the Environmental Management Team, the parkwide Employee Safety Council, the Resource Compliance Team, the Exotic Vegetation Management Team, the Yellowstone Space Team, the Lake Comprehensive Planning Team, the Old Faithful Comprehensive Planning Team, and the Gardiner/Park Street/North Entrance Planning Team.